

**George Rice**  
**Groundwater Hydrologist**

414 East French Place  
San Antonio, TX 78212  
(210) 737-6180  
jorje44@yahoo.com

**General**

More than 20 years experience in groundwater contamination investigations.

**Education**

M.S. Hydrology, University of Arizona, 1991

B.S. Hydrology, University of Arizona, 1979

**Employment History**

1993: Consultant

1988 - 1993: The MITRE Corporation, Brooks Air Force Base, Texas

1983 - 1988: SHB Geotechnical Engineers, Inc., Albuquerque, New Mexico

1980 - 1983: University of Arizona, Tucson, Arizona

1979 - 1980: U.S. Forest Service, Gifford Pinchot National Forest, Vancouver,  
Washington

**Experience**

- Design and install monitor well networks.
- Design, perform, and analyze aquifer tests.
- Design and install vadose zone monitor networks.
- Design and conduct groundwater sampling programs.
- Apply groundwater flow and contaminant transport models to predict the fate of groundwater contaminants (MODFLOW, MT3D, MOC3D).
- Participate in multidisciplinary teams to select and design hazardous waste disposal sites.
- Conduct third party reviews of environmental documents and field programs.
- Expert Witness.

## **Representative Projects**

*Site Characterization* - Principal hydrologist responsible for the hydrologic characterization of low-level radioactive and hazardous waste sites throughout the western United States. The goals of these studies were to determine the extent and intensity of any metals or radionuclide contamination, estimate the rate and direction of contaminant movement, and predict future concentrations at receptor sites. Achievement of these goals required the installation of monitor well networks, installation of vadose zone monitoring instruments, groundwater sampling, the performance and analysis of aquifer tests, and the integration of data into a coherent conceptual model of each site.

*Contaminant Transport Modeling* - Used two and three-dimensional models to design pump and treat systems and estimate the effects of proposed remedial actions on future water quality. Conducted studies to estimate the time required for contaminants to reach potential receptors and estimate contaminant concentrations after plumes reached receptors.

*Waste Repository Design* - Principal hydrologist responsible for estimating the effects of remedial designs on future groundwater quality at low-level nuclear waste repositories in Arizona and Colorado. This required working closely with geotechnical and civil engineers to produce designs that incorporated the hydrologic characteristics required to meet water quality standards.

*Field Methods Instructor* - Member of a team that taught environmental field techniques to Air Force personnel. The four-day course consisted of lectures and field trips. It focused on monitor well design, monitor well construction, sampling program design, and groundwater sampling techniques.

*Quality Assurance Manager* - Manager of hydrology group responsible for evaluating environmental work performed at Air Force bases throughout the United States. Evaluated reports, hydrologic analyses, and field work related to Preliminary Assessments and Site Inspections (PA/SI), Remedial Investigations and Feasibility Studies (RI/FS), and Remedial Actions (RA). These evaluations usually resulted in recommendations for improving overall program design, analytical techniques, or field procedures.

## **Bibliography**

Rice, G., 1987. *Design of Low Level Radioactive Waste Repositories to Minimize Groundwater Contamination*. Presented to Rocky Mountain Association of Environmental Professionals, Albuquerque, New Mexico.

Rice, G., Brinkman, J., and Muller, D., 1988. *Reliability of Chemical Analyses of Water Samples -- The Experience of the UMTRA Project*. Ground Water Monitoring Review, Vol. VIII, No. 3, pp. 71-75.

Casagrande, D., Price, F., Rice, G., Vogel, G., 1989. *Geochemistry Manual*, MITRE Working Paper WP-89W00180. The MITRE Corporation, Civil Systems Division, 7525 Colshire Drive, McLean, Virginia.

Rice, G., Green, R., Pohle, J., 1993, *Reduction in Uncertainty in the Geologic Setting Performance Measure, 10 CFR 60.113(a)(2): Computer Code Selections, Conceptual Models, and Databases*, Prepared for Nuclear Regulatory Commission Contract NRC-02-88-005, Center for Nuclear Waste Regulatory Analyses, San Antonio, Texas.

Rice, G. 1994, *AGUA Report, Contamination of the Edwards Aquifer in Bexar County*.

Green, R., Meyer, K., Rice, G., 1994, *Hydraulic Characterization of Hydrothermally-Altered Nopal Tuff*, Prepared for Nuclear Regulatory Commission Contract NRC-02-93-005, Center for Nuclear Waste Regulatory Analyses, San Antonio, Texas.

Green, R.T., Dodge, F.T., Svedeman, S.J., Manteufel, R.D., Rice, G., Meyer, K.A., Baca, R.G., 1995, *Thermally Driven Moisture Redistribution in Partially Saturated Porous Media*, Prepared for Nuclear Regulatory Commission Contract NRC-02-93-005, Center for Nuclear Waste Regulatory Analyses, San Antonio, Texas.

Rice, G., 1996, *The BFI Tessman Road Landfill: Hydrologic Issues*, Prepared for Larry R. Daves and Associates, San Antonio, Texas.

Rice, G., 1997, *Groundwater and Groundwater Contamination in the Vicinity of Mr. Quintanilla's House, 710 Price Avenue, San Antonio, Texas*, Prepared for Tinsman & Houser, San Antonio, Texas.

Rice, G., 2001, *Evaluation of Groundwater Characterization and Modeling at the Pantex Plant*, June 2001. Prepared for Serious Texans Against Nuclear Dumping (STAND).

Rice, G., 2001, *Evaluation of HDR/SAWS Modeling of the Carrizo-Wilcox Aquifer in Lee, Bastrop, and Milam Counties, Texas*.

Rice, G., 2002, *Groundwater Modeling at Pantex, and Recommendations of the Technical Advisory Group*, Prepared for Serious Texans Against Nuclear Dumping (STAND), September 2002.

Rice, G., 2003, *Background Concentrations of Contaminants in the Ogallala Aquifer at Pantex, an Evaluation*, Prepared for Serious Texans Against Nuclear Dumping (STAND), May 2003.

Rice G., and P. Allison, 2004, *Contaminants in The Ogallala Aquifer at the Pantex Plant*, STAND Technical Report 2004-1, May 2004.

Rice, G., 2004, *The Potential for Groundwater Contaminants from Los Alamos National Laboratory to Reach the Rio Grande*, July 2004.

Rice, G., 2006, *Effects of URI's Kingsville Dome Mine on Groundwater Quality*, Prepared for the Kleberg County URI Citizen Review Board, July 2007.