Sarah H. Gonzalez
Statement of Professional Qualifications

CURRENT POSITION

Geophysicist
Geoscience and Geotechnical Engineering Branch 1
Division of Site and Environmental Reviews
Office of New Reactors
U.S. Nuclear Regulatory Commission
Washington, D.C

EDUCATION

M.S., Geophysics, San Diego State University
B.S., Geological Sciences, Canterbury University, New Zealand

PROFESSIONAL

Seismological Society of America, Member
American Geophysical Union, Member
Reactor Technical Reviewer Qualification, NRC, 2008

QUALIFICATIONS

Ms Gonzalez is a geophysicist with over 5 years of experience in the area of seismic hazards. She has been working in the areas of power plant siting, reactor licensing, and the potential repository at Yucca Mountain. She received a bachelor degree in Geology from the University of Canterbury in New Zealand and a Master's degree in from San Diego State University specializing in geophysics. Her areas of expertise include probabilistic seismic hazard analysis and site response modeling.

Ms. Gonzalez joined the NRC in October 2006. Prior to joining the NRC, Ms. Gonzalez worked for three years as a seismologist for the Center for Nuclear Waster Regulatory Analyses at Southwest Research Institute (San Antonio, TX) where she provided support for U.S. Nuclear Regulatory Commission (NRC) by performing calculations and reviewing and interpreting earthquake hazards and seismic design criteria for the potential repository at Yucca Mountain, Nevada. Ms. Gonzalez was also responsible for performing technical assessment activities to support the NRC uranium recovery and spent nuclear fuel management programs.

As a geophysicist for the Nuclear Regulatory Commission, Ms. Gonzalez is responsible for reviewing Early Site Permit and Combined License applications in the Office of New Reactors (NRO). Ms. Gonzalez's responsibilities include reviewing Safety Analysis Reports for these applications and preparing Safety Evaluation Report (SER) sections related to vibratory ground motion and seismic instrumentation. Ms. Gonzalez is currently performing the seismology reviews for the Vogtle ESP application, 5 COL applications (Calvert Cliffs, V.C. Summer, Bell Bend, Nine Mile Point, Vogtle). She is also assisting in the seismology reviews for the EPR and US-APWR Design Certifications. Ms. Gonzalez is responsible for managing technical assistance contracts for geology and seismology reviews related to new reactor licensing. She is also responsible for performing evaluations of seismology-related issues in support of new reactor licensing.

PUBLICATIONS

Steven M. Day, **Sarah H. Gonzalez**, Rasool Anooshehpoor, and James N. Brune. Scale-Model and Numerical Simulations of Near-Fault Seismic Directivity. Bulletin of the Seismological Society of America, Jun 2008; 98: 1186 - 1206.

Gonzalez, S., G. Ofoegbu, K. Smart, A. Morris, J. Stamatakos. Review of the Bechtel SAIC Company, LLC, Report Titled Peak Ground Velocities for Seismic Events at Yucca Mountain, Nevada, , prepared for U. S. Nuclear Regulatory Commission. Southwest Research Institute Center for Nuclear Waste Regulatory Analyses, San Antonio, TX, August 2006.

Hsiung, S., **Gonzalez, S. H.**, and Chowdhury, A. H. Review of seismic, tornado, and high-wind hazards for and structural design of American Centrifuge Plant in Piketon, Ohio, prepared for U. S. Nuclear Regulatory Commission. Southwest Research Institute Center for Nuclear Waste Regulatory Analyses, San Antonio, TX, February 2006.

Hsiung, S., **Gonzalez, S. H.**, Smart, K. J., and Chowdhury, A. H. Soil structure interaction – progress report: site response analyses, prepared for U. S. Nuclear Regulatory Commission. Southwest Research Institute Center for Nuclear Waste Regulatory Analyses, San Antonio, TX, August 2005.

Gonzalez, S. H., Stamatakos, J. A., Murphy, K., Evaluation of site response for the surface facilities site at the potential Yucca Mountain Repository, Nevada, Seismological Society America, Annual Meeting, April 2005.

Heggy, E., S. M. Clifford, R. E. Grimm, **S. H. Gonzalez**, D. R. Bannon, and D. Y. Wyrick. Mapping subsurface stratigraphy and anomalies in iron-rich volcanoclastics using ground penetrating radar: Potential for shallow soundings on Mars. Paper presented at the Workshop on Radar Investigations of Planetary and Terrestrial Environments, Houston, February 2005.

Gonzalez, S. H., C. L. Dinwiddie, R. E. Grimm, E. Heggy, D. Y. Wyrick, D. A. Ferrill and S. M. Clifford. Electrical conductivity of the Bishop Tuff, Bishop, CA: Implications for ground-penetrating radar performance. EOS Transactions 85, no. 46, December 2004.

Hsiung, S., **Gonzalez, S. H.**, Stamatakos, J. and Chowdhury, A. H. Review of seismic, tornado, and high-wind hazards and structural design assessments of Louisiana Energy Services National Enrichment Facility, Lea County, New Mexico, prepared for U. S. Nuclear Regulatory Commission. Southwest Research Institute Center for Nuclear Waste Regulatory Analyses, San Antonio, TX, December 2004.

Gonzalez, S.H., J.A., Stamatakos, K. R. Murphy, and H. L. McKague. Preliminary evaluation and analysis of the U.S. Department of Energy geotechnical data for the waste handling building site at the potential Yucca Mountain repository, prepared for U. S. Nuclear Regulatory Commission. Southwest Research Institute Center for Nuclear Waste Regulatory Analyses, San Antonio, TX, June 2004.

Dinwiddie, C.L**.**, J.A. Stamatakos, **S.H. Gonzalez**, R.E. Grimm, H.L. McKague, L.B. Browning, and D.A. Ferrill. Selection and characterization of terrestrial analogs to the Martian crust: Field

sites in the U.S. desert southwest for testing radar sounders. *Eos Transactions*. AGU, *85*(17), Joint Assembly Supplement, Abstract P53A-03. Montreal, QC: May 17-21, 2004.

Gonzalez, S. H. (2003). Foam rubber and numerical simulations of near-fault seismic directivity,Master's Thesis, San Diego State University, San Diego, California.

Gonzalez, S.H., A. Anooshehpoor, S. M. Day, and J. N .Brune. Foam rubber and numerical simulations of near-fault seismic directivity, Seism. Res. Letts., 73, p. 229. 2002.

Gonzalez, S.H., A. Anooshehpoor, S. M. Day, and J. N . Brune. Foam rubber and numerical simulations of seismic directivity for the PEER Lifelines Program; Proceedings of the SCEC 2002 Annual Meeting, September 7-11, 2002, Oxnard, California, p. 74. 2002.