

## QUALIFICATIONS

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### **Education**

B.A. (physics) Pomona College, 1958, magna cum laude.  
M.S. (physics) Univ. Wisconsin, 1960.  
Ph.D. (low temperature physics) Univ. of Wisconsin, 1964.  
Academic honors: Phi Beta Kappa; Pi Mu Epsilon; Sigma Xi.

### **Relevant experience**

- 25 years experience in thermal engineering at Los Alamos National Laboratory, including supervision of RCRA Facility Investigation of large waste disposal sites containing hazardous and radioactive wastes.
- Six years part-time experience consulting on vapor extraction and soil remediation.
- Continuing research on vapor transport in soils and passive vapor extraction; authored six publications since 2001.
- Three years' service on the governing board of STRONGER, Inc..

### **Continuing research**

Transport of volatile organic compounds and other contaminants in the vadose zone.

### **Professional experience**

- 2004-12**     Guest scientist, Los Alamos National Laboratory.
- 2003**        Scientist-in-residence, Meadville Theological School, winter quarter.
- 1996-2002**   Senior Scientist, Science & Engineering Associates, Inc.
- 1994-96**     Scientist, ERM, Inc.
- 1968-94**     StaffMember, Group Leader, and Project Leader, Los Alamos National Laboratory.

**AWARDS**     Department of Energy Certificate of Appreciation, 1984.

**PATENTS**    "Ventilation of Porous Media," U.S. Pat. 5,288,169 (Feb. 22, 1994).

**LICENSES**    Commercial pilot; certified flight instructor (expired).

**Professional association**

American Geophysical Union

**Technical publications related to soils**

"Transport by Oscillatory Flow in soils with rate-limited mass transfer I. Theory," D. A. Neeper and P. Stauffer, accepted for publication in the *Vadose Zone Journal*, 2012.

"Transport by Oscillatory Flow in soils with rate-limited mass transfer II Field experiment," D. A. Neeper and P. Stauffer, accepted for publication in the *Vadose Zone Journal*, 2012.

"Unidirectional gas flow in soil porosity resulting from barometric pressure cycles," D. A. Neeper and P. Stauffer, *Journal of Contaminant Hydrology* 78, 281-289, 2005.

"Harmonic Analysis of Flow in Open Boreholes due to Barometric Pressure Cycles," D. A. Neeper, *Journal of Contaminant Hydrology* 60, 135-162 (2003).

"Investigation of the Vadose Zone with Barometric Pressure Cycles," D. A. Neeper, *Journal of Contaminant Hydrology* 54, 59-80 (2002).

"A Model of Oscillatory Transport in Granular Soils, with Application to Barometric Pumping and Earth Tides," D. A. Neeper, *Journal of Contaminant Hydrology* 48, 237-252 (2001).

"The Influence of Topography, Stratigraphy, and Barometric Venting on the Hydrology of Unsaturated Bandelier Tuff," D. A. Neeper and R. H. Gilkeson, in The Jemez Mountains Region: New Mexico Geological Society, Forty-Seventh Annual Field Conference, Sept. 25-28, 1996, F. Goff, ed., pp. 427-432.

"Barometric Pumping with a Twist: VOC Containment and Remediation without Boreholes," W. Lowry, D. Neeper, and S. Dunn, Proc. Industry Partnerships to Deploy Environmental Technology, Morgantown WV, Oct. 22-24, 1996. DOE/CONF-9610231-31.

"Frequency Domain Analysis of Subsurface Barometric Flows," D. A. Neeper and S. P. Limback, EOS, Transact. Amer. Geophys. Union 75 (44, Suppl.) p. 264, 1994. Amer. Geophys. Union 1994 Fall meeting, San Francisco CA, Dec. 5-9, 1994.

"Soil Vapor Extraction Enhanced by Oscillatory Flow," D. A. Neeper, Proc. Fifth National Outdoor Action Conf. on Aquifer Restoration, Ground Water Monitoring, and Geophysical Methods, Las Vegas NV, May 13-16, 1991, pp. 75-88.