



# **David J. Kerkes, Ph.D., P.E.**

## **Consulting Geotechnical (Civil) Engineer**

With over thirty years of international experience in design and construction, I provide consulting services and litigation support in a broad variety of geotechnical areas. I am also an experienced engineering educator, having taught university level graduate and undergraduate courses, as well as a continuing education course nationally for the American Society of Civil Engineers.

### **PROFESSIONAL REGISTRATION**

Registered Professional Engineer: Colorado, Indiana, Texas

### **AREAS OF EXPERTISE**

- Stability analysis of soil and rock slopes
- Groundwater seepage analyses and drainage design
- Analysis and design of retaining walls and sheetpile structures
- Design, construction, safety, and remediation of earth and rockfill dams
- Numerical modeling of problems in geotechnical engineering
- Landfill design and liner construction quality assurance
- Geotechnical field and laboratory investigations
- Large strain consolidation theory and analyses
- Earthwork construction and quality assurance
- Project coordination and management
- Project planning and scheduling
- Engineering education and training

### **EDUCATION**

- Ph.D., Civil (Geotechnical) Engineering, University of Colorado, 1990
- M.S., Civil (Geotechnical) Engineering, University of Connecticut, 1975
- B.S.E., Civil Engineering, University of Connecticut, 1971

### **PROFESSIONAL AFFILIATIONS**

- United States Society on Dams (USSD)
- Chi Epsilon and Tau Beta Pi (Engineering Honor Societies)

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## **Consulting Geotechnical (Civil) Engineer**

### **BIOGRAPHICAL SKETCH**

I am an independent geotechnical consultant with over thirty years of civil engineering experience. I am a registered professional engineer in several states, and I hold a doctoral degree in civil engineering from the University of Colorado at Boulder, with a specialty in geotechnical engineering. My experience includes the various aspects of analysis and design, project management, estimating and scheduling, engineering administration, construction management, construction quality assurance, and the supervision of technical staff. I have been responsible for the preparation of technical proposals, feasibility studies, design reports, construction drawings, and specification packages, and have submitted reports to various local, state, and federal agencies.

I have had major roles in the design and construction of earth and rockfill dams for water resource development projects in the United States, Southeast Asia, and South America, and I have served as a senior review consultant for dam projects in the United States and overseas. I was actively involved in the Federal Dam Safety Inspection Program, performing over 50 dam safety inspections in seven states and preparing the geotechnical sections of the Phase I Reports, as well as the preparation of 10 Structural Behavior Reports for dams of the U.S. Bureau of Reclamation. At the invitation of the Texas Commission on Environmental Quality, I presented a one day seminar on concepts related to dam design and safety for the members of the Dam Safety Program. In addition to my experience with dams and natural slopes, I also have considerable experience in the geoenvironmental field and have worked on numerous projects for the major national waste disposal companies on both municipal and hazardous waste landfills. I have been directly involved in landfill permitting, design, and construction quality assurance of composite soil and geosynthetic liner systems, as well as leachate collection systems. My work includes the stability of final cover systems and the evaluation of the long-term settlement and stability of waste impoundments. I also served as a member of the Texas Commission on Environmental Quality's ad hoc committee on the use of waste as ballast for landfills constructed below the seasonal high groundwater level.

I provide my expertise to engineering firms and law firms on a variety of projects, including the design of storm water detention ponds, groundwater seepage analyses, the evaluation of existing dams, the design of flood control levees, stability analysis of slopes and deep excavations, settlement and consolidation analyses of earth structures and shallow foundations, analysis and design of retaining walls and sheet pile structures, and landfill design and construction. I also currently serve as needed on a technical assistance contract with the Federal Emergency Management Agency, and in that capacity I perform assessments of landslides, earth dams, and landfills damaged by natural disasters. In addition, I am an experienced engineering educator and served on the faculty of the University of Connecticut as Assistant Department Head of Civil Engineering for four and a half years. I am actively involved in continuing education and have taught courses and seminars on the shear strength of soil, fluid flow through soil, and soil settlement and consolidation, which I also taught nationally for the American Society of Civil Engineers.