

# **RESUME**

## **Lee A. Knuppel, P.E.**

### **OFFICE:**

LEE A. KNUPPEL AND ASSOCIATES, Inc.  
7770 Cooper Road, Suite 7  
Montgomery, Ohio 45242  
(513) 793-4222

### **EDUCATION:**

#### Graduate:

UCLA, Los Angeles, CA  
M.S. in Civil Engineering, 1974  
Major - Soil Mechanics, Ground Water and Earthquake  
Engineering

#### Undergraduate:

University of Arizona - Tucson, Arizona  
B.S. in Civil Engineering, 1970  
Major – Soil Mechanics and Structural Design

#### Additional Training:

Earthquake Engineering (Geotechnical and Structural)  
Management Institute  
Groundwater Analysis and Design  
Designing with Geosynthetics (EPA)  
Conference of In-situ Testing (ASCE)  
Shear Strength of Soil and Rock (COE)  
Soil Improvement

### **REGISTRATION:**

Registered Professional Engineer in Ohio  
Registered Professional Engineer in Kentucky  
Registered Professional Engineer in California (Inactive)  
Registered Professional Geotechnical Engineer in California (Inactive)

## **EXPERIENCE:**

- 1993-Present      Consulting Engineer & President, Lee A. Knuppel & Assoc., Inc.
- Mr. Knuppel, directed multi-disciplinary engineering services to the Ohio and Kentucky area. Specializing in geotechnical, civil and structural engineering. Majority of work is foundation design for new structures, repair of damaged foundations due to settlement or expansive soils, landslide stabilization, and design of all types of retaining walls (concrete, segmented block, lagging and pile, anchored). Foundation repairs often include underpinning, jacking, slab jacking, wall anchors, and stabilization of foundation soils and backfill materials along with improved drainage (surface and subsurface).
- 1990-1993      Director, Ohio River Division Laboratory, U.S. Army Corps of Engineers
- As Director of the Laboratory, responsibilities included managing, directing work and custody of the physical plant of the Ohio River Division Laboratory. Mr. Knuppel was responsible for the testing of soil, materials, rock, water quality, hazardous and toxic waste, and other materials.
- 1983-1990      Division Soil Engineer, U.S. Army Corps of Engineers
- As a specialist in the field of soil engineering Mr. Knuppel reviewed studies performed by four districts, related to design, plans and specifications, and special studies for military and civil work projects. Such projects include: local protection with flood walls, levees, pumping plants, navigation locks and dams, multipurpose dams of earth and concrete, seismic evaluations, highway and railroad structures, and foundations for military and civil structures. Performed field inspections of construction projects to verify that actual conditions are consistent with design assumptions and works with project personnel in developing appropriate and timely changes in the design when unforeseen or changed conditions are encountered. Mr. Knuppel was responsible for developing policy and furnishing technical guidance to the 4 ORD districts.
- 1978-1983      Chief, Soil Design, U.S. Army Corps of Engineers (USACE, L.A. District)
- As Chief, Soil Design, delegated with complete authority for making technical and administrative decisions within the framework provided by Corps of Engineer regulations and policies. Responsible for development

of investigation plans and the final concept of design; directing and analyzing all geotechnical studies; and for minimizing the project impacts on the environment. Acted as consultant and expert advisor to all elements of the district and government agencies on problems involving earth structures, foundation design, earthquake engineering, ground water and construction. Insured that construction is completed in accordance with the project plans and specifications. Analyzed current and scheduled work load for Soil Design, established priorities, work schedules, and determined manpower requirements. Supervised 10 to 18 civil engineers and technicians, and was responsible for design expenditures of over one million dollars annually.

1976-1978                    Senior Soil Engineer (USACE L.A. District)

As Senior Engineer, Mr. Knuppel was responsible for the development of soil studies and analysis of soil data for embankment and foundation design for civil works, including dams, channels, levees, structures and roads. Acted as consultant to other district elements and outside agencies on sitting facilities and reviews for other government agencies complex projects to evaluate their static and dynamic stability.

1970-1976                    Staff Engineer (USACE)

For assigned projects, conducted various design studies for breakwaters, jetties, revetments, roadways, dams, levees, buildings and other structures.

**RELATED EXPERIENCE:**

1977-1979                    Instructor, California State University, Los Angeles

Undergraduate courses taught:  
Soil Mechanics I, Soil Mechanics Laboratory,  
Foundation I

Graduate courses taught:  
Soil Mechanics II, Foundation II

1984-1994                    Instructor, Corps of Engineers:

Course taught:  
Drilling and Sampling for Engineering Purposes

## **HTRW EXPERIENCE AND QUALIFICATIONS:**

Mr. Knuppel served as Director of the Ohio River Division Laboratory from March 1990 to December 1993, where he had responsible for the sampling and testing of numerous HTRW related projects. In addition, four military facility designs for the storage of hazardous waste were reviewed for design adequacy.

Mr. Knuppel is an accomplished Civil Engineer specializing in soil mechanics, groundwater seepage analysis and remediation. As a design engineer, his experience includes design of clay lined and soil cement lined lakes/ponds, design and evaluation of construction dewatering systems and design of permanent seepage control measures for a number of dams in California and Arizona. He also served as a consultant to the Nuclear Regulatory Commission where he was responsible for the PSAR review of four nuclear power plants and the construction inspection on two nuclear power plants. Mr. Knuppel was responsible for the evaluation and design of under seepage correction measures at Painted Rock Dam, which at the time was impounding over two million acre-feet of water.

Mr. Knuppel has prepared numerous Phase I Environmental Site Assessment reports and two Phase II remediation reports.

Mr. Knuppel's duties at the Ohio River Division included the reviews of HTRW geotechnical studies performed by four districts related to design, plans and specifications, and special studies for military and civil works projects. Many of these projects use geosynthetics, and/or Bentonite Slurry for seepage control or prevention.

## **MAJOR PROJECT DESIGNS:**

### **Corps of Engineers**

#### Major Earth Dam Designs:

- Cave Buttes Dam and outlet tunnel, Phoenix, Arizona; flood control
- Adobe Dam and outlet tunnel, Phoenix, Arizona; flood control
- New River Dam and outlet tunnel, Phoenix, Arizona; flood control
- Mentone Dam, San Bernardino, California; flood control
- Olmsted Lock and Dam, Western Kentucky;

#### Seismic Stability Studies of Existing Dams:

- Whittier Narrows Dam, Whittier Narrows, California
- Santa Fe Dam, L.A. County, California
- Fullerton Dam, Brea, California
- Barkley Dam, Southwestern, Kentucky

#### Recreation Area designs:

- Santa Fe Dam Recreational Area, L.A. County, California
- Carbon Canyon Dam Recreational Area, Brea, California

## Craig Park Recreational Area, Fullerton, California

### Miscellaneous Designs:

L.A.-L.B. Harbor, California; Hydraulic fill and breakwater design  
Painted Rock Dam, Gila Bend, Arizona; Underseepage corrective measures design

### **U.S. Postal Service**

Foundation design for City of El Monte, California; Bulk Postal Facility  
Foundation design for City of Upland, California; Bulk Postal Facility

### **NASA**

Design of Space Shuttle Transport Road, Edwards AFB, California

### **Nuclear Regulatory Commission**

Palo Verde Nuclear Power Plant, PSAR Review and Construction  
Inspection  
San Onofre Nuclear Power Plant, PSAR Review and Construction  
Inspection  
Blue Hills Nuclear Power Plant, PSAR Review  
Clinch River Nuclear Power Plant, PSAR Review

### **PUBLICATIONS**

1. Knuppel, Lee A., "Liquefaction Potential of Proposed Fills, Los Angeles Harbor". Thesis presented to the University of California, 1974.
2. Pyke, R.; Knuppel, Lee; Lee, K., "Liquefaction Potential of Hydraulic Fills", ASCE, Journal of the Geotechnical Engineering Division, 1978.
3. Knuppel, Lee A., "Barkley Dam Seismic Stability Study", Proceedings Ohio River valley Soil Seminar XVI, Applied Soil dynamics, 1985.
4. Knuppel, Lee A.; McLean, Francis, "Underseepage Control Measures Painted Rock Dam". Presented at the Second International Conference on Case Histories in Geotechnical Engineering, 1988.