

Robert Pyke, Consulting Engineer**RESUME****EDUCATION**

B.E. in Civil Engineering, University of Sydney, 1963
Ph.D. in Civil Engineering, University of California, 1973
[major in geotechnical engineering; minors in rock mechanics
and environmental planning]

EXPERIENCE

Australian Department of Works - 1964 to 1968. Staff Engineer engaged in investigations, design and construction of a major earth-and-rockfill dam and trunk water supply pipelines.

University of California, Berkeley - 1969 to 1973. Teaching and Research Assistant; conducted research for Ph.D. thesis on settlement and liquefaction of sands during earthquakes.

Dames & Moore, San Francisco - 1973 to 1976. Project and Senior Engineer on a variety of projects involving the behavior of foundations and earth structures subjected to wave and earthquake loadings including nuclear power plants, earth dams, pipelines, harbor facilities and offshore platforms.

Self Employed - 1977 to present - Individual consultant on special geotechnical, earthquake and water resources engineering problems. Interrupted by employment by SAI, 1979-1980, and ARCADIS US, 2009-2010.

REGISTRATIONS

Civil Engineer, California, 1976, CE 27248
Geotechnical Engineer, California, 1987, GE 702

PROFESSIONAL SOCIETIES

American Society of Civil Engineers
Earthquake Engineering Research Institute
Seismological Society of America
United States Society on Dams

MAJOR PROJECT EXPERIENCE

EPRI/DoE Ground Motion Study - Developed guidelines for conduct of site investigations and site response analyses including updated generic shear modulus reduction and damping curves.

Mormon Island Auxiliary Dam, California - Member of consulting board (with J.K.Mitchell, L.W.D.Finn and R.B.Peck) for Bureau of Reclamation on seismic upgrade.

Seven Oaks Dam, San Bernardino County, for Los Angeles District, Corps of Engineers. Consultant on design and construction of major dam adjacent to the San Andreas fault.

San Francisco - Oakland Bay Bridge, East Span Seismic Safety Project - With Earth Mechanics Inc., member of seismic ground motion team, team leader for studies of seismic stability of the Oakland Mole.

Yucca Mountain Nuclear Waste Repository - Member of Seismic Advisory Panel (with J.C.Stepp, C.A.Cornell, R.P.Kennedy and C.A.Costantino).

San Pablo Dam, Orinda, California - Member of board of technical review board (with J.K.Mitchell and Don Babbitt) for East Bay Municipal Utility District on seismic upgrade to a major dam in a populated area.

Chemical and Metallurgical Research Laboratory Replacement, Los Alamos National Laboratory. Consultant on seismic issues associated with design of major nuclear research facility.

Idaho National Laboratory. Member, Blue Ribbon Panel for review of seismic design of IWTU (with C.A.Costantino, T.Houston, R.Lee and W.Lettis).

Bay Area Rapid Transit System, San Francisco Transition Structures and TBT Uplift Studies. Consultant to Parsons Brinkerhoff and BART.

Treasure Island, San Francisco Bay. Key consultant to development team on proposed \$6 billion commercial-residential re-development of former Navy base located on potentially liquefiable sands and soft Bay Muds. Facilitator of Independent Review Panel comprised of Professors J.K.Mitchell, I.M.Idriss, R.B.Seed and R.W.Boulanger.

Hondsbosche and Pettermer Dikes, for ARCADIS NL, the Netherlands. Third party review of proposed raise of critical North Sea dike.

Stevens Creek and Lenihan Dams, for Santa Clara Valley Water District. Senior consultant on seismic stability evaluations.

Delta Stewardship Council, California. Initial project manager for independent review of the Bay Delta Conservation Plan.

SPECIALIZED EXPERIENCE

PIPELINES AND TUNNELS

Water Supply System, Canberra, Australia - As Staff Engineer for Department of Works, supervised design of 36-inch diameter water supply pipelines and participated in repair of a damaged 66-inch pipeline.

Alyeska Pipeline, Alaska - As Staff and Project Engineer for Dames & Moore, conducted studies related to static and seismic response of buried pipeline segments.

Sohio West Coast to Mid-Continent Crude Oil Pipeline, for Sohio Transportation Company - As Senior Engineer and Consultant to Dames & Moore, supervised development of seismic design criteria for pipeline and pumping stations.

Northshore Outfall Consolidation Sewer, for City and County of San Francisco - As consultant to Dames & Moore, advised on seismic design of box structure in poor ground. Devised innovation approach for mitigation of liquefaction hazard.

Beta Field Pipelines, San Pedro Bay, California, for Shell California Production - As consultant to Shell and Mesa², provided engineering input on routing of pipelines which cross an active fault zone

Generic Nuclear Waste Isolation Study, for Savannah River Laboratory and ONWI - Consultant to Science Applications, Inc., on study of seismic response of deep tunnels.

Renton Effluent Transfer System - Consultant to URS/Blume on evaluation of liquefaction potential and on slope stability problems for ocean outfall.

Islais Creek Facilities, Clean Water Program, City and County of San Francisco - Consultant on aseismic design and soil-structure interaction studies for transport/storage sewers.

Inland Feeder Tunnel, San Bernadino Mountains, for MWD of Southern California. Consultant to Jacobs Associates on seismic design issues.

Diablo Canyon Nuclear Power Plant. Consultant to Harding Lawson Associates and Pacific Gas & Electric Company on replacement of ASW pipelines.

Devil's Slide Tunnel, San Mateo County, California. Member of final design team.

Caldecott Tunnel Fourth Bore, Alameda/Contra Costa Counties. Member of planning and design team.

SPECIALIZED EXPERIENCE**LEVEES AND DELTA ISSUES**

McDonald Island, Sacramento-San Joaquin Delta, California. Consultant and expert witness relative to 1982 levee failure.

Yuba River, Sutter County, California. Consultant and expert witness relative to 1986 levee failure – the Paterno Case.

Guadalupe Creek and Alameda Creek Levees. Consultant to Geo-Resource Consultants on repairs to existing flood control levees in accordance with USACE criteria. For Santa Clara Valley Water District.

Victoria Island Intake and Franks Tract Flood Control Gates, Sacramento San Joaquin Delta. Consultant to Hultgren Tillis Engineers on design of new facilities embedded in existing levees. For Contra Costa Water District and California DWR.

Mississippi River Levees, USACE, New Orleans District, Plaquemines Parish, Louisiana. Independent technical review of upgrades of 11 miles of Mississippi River levees.

Lake Pontchartrain Levees, USACE, New Orleans District, Jefferson Parish, Louisiana. Independent technical review of upgrades of 12.3 miles of Lake Pontchartrain levees.

Hondsbosche and Pettermer Dikes, for ARCADIS NL, The Netherlands. Peer review of proposed raise of critical North Sea dike.

Horseshoe Bend Hydroelectric Project, Oregon, for Innergex. FERC Part 12 review of project, including 3-mile long power canal and spillway.

Delta Wetlands Project. Design review and supervision of independent cost estimates.

Frank's Tract Gate Project, for Bureau of Reclamation and California DWR. Consultant on earthquake considerations and co-ordination of completion of 30% design of gates.

Reclamation District 17, Chair of Board of Senior Consultants, for EIP levee improvements. Cities of Lathrop and Manteca, Chair of Board of Senior Consultants for evaluation of progress in meeting ULDC criteria.

Delta Protection Commission, California. Lead author of Chapter 5 of the Delta Economic Sustainability Plan on risks to delta levees from floods, earthquakes and sea-level rise.