SPECIALIZED EXPERIENCE

SITE RESPONSE, DYNAMIC SOIL PROPERTIES, LIQUEFACTION AND SETTLEMENT

Research on liquefaction and settlement of sands under multi-directional shaking for Ph.D. at University of California, Berkeley.

Humboldt Bay Power Plant, Eureka, California - As Project Engineer for Dames & Moore, conducted evaluation of liquefaction potential for existing nuclear power plant.

Warm Springs Dam, Sonoma County, California - As Project Engineer for Dames & Moore, conducted seismic analyses including evaluation of liquefaction potential for streambed alluvium which was to be left in place under embankment.

Proposed Landfill, Port of Los Angeles, Los Angeles, California - As Project Engineer for Dames & Moore, conducted evaluation of liquefaction potential for proposed hydraulic fill.

Rio Blanco Underground Nuclear Event - As Project Engineer for Dames & Moore, interpreted field measurements for excess pore pressures resulting from this event.

South Dade Nuclear Power Plant Site, Florida - As Senior Engineer for Dames & Moore, conducted evaluation of liquefaction potential for PSAR on proposed nuclear power plant.

Virgil C. Summer Nuclear Station, South Carolina - As Senior Engineer for Dames & Moore, conducted evaluation of liquefaction potential for FSAR on nuclear power plant.

Sohio Crude Oil Terminal, Long Beach, California - As Senior Engineer and Consultant to Dames & Moore, conducted evaluation of liquefaction potential for existing hydraulic fill.

Savannah River Plant, South Carolina - As consultant to E. I. duPont de Nemours & Co. in association with URS/Blume, recommended future procedures for evaluating potential for liquefaction.

Sylmar Converter Station, California - Consultant to URS/Blume on evaluation of liquefaction potential of site damaged in 1971 earthquake.

Sonoma County Water District - Consultant to Cooper Engineers on seismic response of pumping facilities located in the Russian River.

Expansion of Piers A and J, Port of Long Beach - Consultant to Geofon, Inc., on geotechnical and site response studies for new hydraulic fills and wharfs.

Point Arguello Natural Gas Pipeline, Gaviota, California - Consultant to Geotechnical Engineers, Inc. and Chevron Pipeline on possible movements of pipeline as a result of

liquefaction.

EPRI/USGS Liquefaction Experiment, Parkfield, California - Predictor of expected ground response and excess pore pressures at instrumented site.

Savannah River Plant, South Carolina - As consultant to Westinghouse Savannah River Company, review of seismic settlement and liquefaction studies conducted for Area K.

Port of Los Angeles - Invited speaker at workshop on seismic design issues. Consultant to Pier 400 Design Consultants on studies for major new landfill. Consultant to Geofon, Inc. on Pier 300 LAXT seismic stability analyses.

Islais Creek Transport and Storage Sewer Project, San Francisco - Development of design earthquake motions and conduct of soil-structure interaction studies for box structure partially embedded in Young Bay Mud.

Old Customs House, San Francisco - Conducted seismic hazard analyses, site response analyses and developed design response spectra and acceleration histories for proposed seismic upgrade.

Richmond Parkway, Section 4B - Conducted site response analyses and developed site-specific design response spectrum for viaduct.

Richardson Bay Bridge, Marin County - Conducted site response analyses and developed site-specific design response spectrum for seismic upgrade of existing bridge structure. made special study of expected peak and relative displacements.

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.

West Contra Costa Sanitary Landfill - For RUST Environment and Infrastructure, conducted final static and seismic analyses for Class II facility.

New Palmdale Landfill - Advanced seismic stability analyses of new lined landfill adjacent to San Andreas Fault.

Brookhaven National Laboratory - Consultant on selection of dynamic properties for site response analyses for Savannah River Plant.

NSF/Caltrans/EPRI Northridge Earthquake Study - Co-Principal Investigator of major study of site effects observed during the Northridge earthquake.

SFOBB East Span Seismic Safety Project - Member of seismic hazard and site response analysis team.

San Francisco International Airport Runway Reconfiguration Program - Member of seismic hazard and site response team.

Proposed LNG Facility, Puerto Cortes, Honduras - Consultant to Haley & Aldrich and AES on seismic hazard, site response and liquefaction studies.

CMRR Project, Los Alamos National Laboratory. Subject matter expert on studies of site response and lateral deformation involving nonlinear deconvolution and two-dimensional nonlinear calculations of deformations.

Plus conduct of nonlinear site response analyses for a number of additional LNG terminal, jack-up rigs sites and critical facilities.

Site Response Analyses for the Banyu Urip Project, Offshore Java, for Exxon-Mobil.

Review of assessments of liquefaction potential for onshore and nearshore area, James Price Point LNG facility, for Woodside Energy.

Review of assessment of liquefaction potential for site near Cambridge, New Zealand, for Transpower New Zealand Ltd.

Review of assessments of site response and liquefaction potential for Juniper Field, Offshore Trinidad, for BP America.

Site response analyses and evaluation of liquefaction potential for Facebook, West Campus, Menlo Park CA

Dr Pyke is also the developer of the nonlinear site response analysis program TESS which was independently verified during the recent PEER Nonlinear Site Response Study co-ordinated by Professor Jonathan Stewart.