

ABSTRACT

Geotechnical aspects of the M8.8 Chile Earthquake, as documented by members of the Geo-engineering Extreme Events Reconnaissance (GEER) Association, are discussed. GEER conducts NSF-sponsored reconnaissance efforts of the geotechnical effects of extreme events, focusing on data collection to support advancements in the state-of-the-art and the state-of-practice of geotechnical earthquake engineering. During the post-event reconnaissance, the GEER team traveled 700km along the coast of Chile from Valparaiso north of Santiago to Lebu south of Concepcion, documenting case histories of liquefaction-induced settlement, lateral spreading effects on bridges, ports and industrial facilities, assessing the seismic performance of dams, levees, tailings dams, earth embankments & retaining walls, identifying landslides and evidence of site effects. The key findings of this effort are presented here.