Prehistoric South Carolina earthquakes

In South Carolina, geologists have recently discovered evidence of at least five large paleoearthquakes during the past 5,000 years (Amick and Maurath, 1988). During a strong earthquake, subsurface saturated sand becomes liquefied and this fluid mass can be ejected to the surface (Figure 1). As shown in Figures 2 and 3, paleoliquefaction features, considered earthquake induced, have been found in South Carolina’s coastal area. The resulting liquefaction features, sand blows, vents/fissures, landslide, and differential compaction, are preserved in the soil as evidence of the earthquake’s occurrence and strength. Given the necessary conditions, a magnitude 5.5 quake can generate liquefaction features that could cause damage to existing facilities and property (Figure 4).