

ASCE 1: Standard for Geotechnical Analysis, Design, Construction, Inspection and Monitoring of Nuclear Safety-Related Structures

By ASCE 1 Committee: Presented by Zia Zafir, PhD, PE, GE

ASCE 1 is a soon-to-be-released new standard covering geotechnical components of analysis, design, construction, inspection and monitoring for nuclear safety-related structures. This standard replaces ANSI/ASCE 1-82 / N-725, "Guideline for Design and Analysis of Nuclear Safety Related Earth Structures," last published in 1982. ASCE 1 provides requirements for: site characterization, geotechnical analysis and design, excavations, backfill, and dewatering, and inspection, instrumentation and monitoring. The standard includes consideration in analysis and design of natural and environmental hazards that are due to geological processes, including earthquakes, volcanoes, landslides and tsunamis. Guidance for the consideration and quantification of uncertainty in site characterization, geotechnical analysis and design is provided. In addition, a description of typical project features and associated design and analysis considerations are provided. An overview of the requirements for site characterization, and geotechnical analysis and design are provided in this presentation.