

MAY 2016 MEETING

Wednesday, May 11, 2016 (1.0 PDH)

TECHNICAL PROGRAM

Reduction of Soil Swell Through Chemical Stabilization

Speaker: John A Gunter, P.E. Chief Engineer at Terradyne/InTEC (Integrated Engineering and Testing), Austin

John A Gunter is Chief Engineer with InTEC in Austin, responsible for overseeing and reviewing the geotechnical work in Austin, DFW, Denver and California. He has worked in geotechnical engineering for around 40 years. John holds a Bachelor of Science degree in Civil Engineering and a Master of Civil Engineering (Geotechnical) both from the University of Houston. He is a member of the American Society of Civil Engineers and has published a wide range of articles on geophysical and geoenvironmental subjects.

PRESENTATION SUMMARY

Injection has proven to be the most effective means to treat soils with high plasticity. There are three injection methods commonly used today: Chemical Injection, Lime Injection, Water Injection. Chemical injection with Earthlok is superior to the other methods because it is permanent. The chemical creates an ionic exchange that changes the molecular structure of the soil. The change of structure then disallows the absorption of water. Regardless of periods of extreme drought or water saturation, soil treated with Earthlok will remain constant. Since Earthlok is independent of moisture levels—the injection process can be complete up to 50% faster than the other injection methods—this saves time and money! Finally, Earthlok has been specifically formulated to be eco-friendly and uses up to 50% less water than other methods.

Specific points that John Gunter discussed as part of his presentation included:

1. Earthlok Soil Stabilizer is a chemical soil stabilizer which induces an ionic exchange on the clay's surface at the molecular level
2. The water bound to the soil is replaced by ions in Earthlok Soil Stabilizer
3. The use of a surfactant to allow the chemical to reach the soil