Duke Energy Project

COMPACTION GROUT PROJECT

Project

The compaction grout project is a nuclear power plant located in Crystal River, FL. This project consisted of the design and construction of a new Wastewater Treatment (WWT) system for flue gas desulfurization (FDG) blowdown water prior to disposal into the existing percolation ponds on the south side of the plant discharge channel. The Geotechnical Engineer of Record recommended a ground improvement solution of compaction grout pumped to improve the load bearing capacity of the existing sandy/silty soils at the site.

Challenge

- Sandy/Silty conditions were in loose condition up to 11 feet

- Numerous layers of sand, silt, and clay were encountered in the limestone stratum

Solution

Helicon worked alongside the geotechnical design team to develop a compaction grout program designed to meet the building code load criteria. The drilling of 87 compaction grout points and 1,600 cubic yards of grout mixture injections were the course of action taken on this project. The injection of a cementitious grout mixture, under pressure, through the clay formation further compacted the soils thereby reducing the total settlement through the layer. Efficient planning & coordination was key to overcoming the challenges & limitations. Helicon collaborated with the Geotechnical Engineer of Record throughout the work and confirmed all recommended criteria were followed.

Client: Duke Energy
Engineer: S&ME
Market: Industrial
Solution: Ground Improvement
Services: Compaction Grout

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