Chemical Storage Tanks

Ground Improvement – Installing Aggregate Piers

PROJECT OVERVIEW

Three UAN (Urea, Ammonia, and Nitrogen) Tanks, 176 feet in diameter, were being constructed in an agricultural area for a new Fertilizer Plant. Approximately 6,000 Aggregate Piers / VSCs were to be installed at the proposed site of the three tanks.

REQUIREMENTS AND CHALLENGES

The tanks were designed for a maximum settlement of 2 inches at the edge of the tanks. It was estimated that the total settlements on the order of 6 to 8 inches would occur if no ground improvement was performed. Aggregate Piers were to be installed through the upper soft soil stratum to the dense sands approximately 20 feet below subgrade to meet the project requirements.

Due to a very wet spring season, set preparation was delayed and put the project behind schedule. The project was two weeks behind when CNC Foundations was finally able to proceed with the installation of the Aggregate piers. To accommodate the General Contractor (GC) and get the project back on schedule, CNC Foundations added a VSC rig and crew to the site. This allowed us to make up the lost time and get the project back on schedule.

SOLUTION AND RESULTS

The entire project, in spite of the initial start date, was still completed two weeks prior to the original date committed to by the General Contractor.

Project Details

SECTOR
Large UAN Chemical Storage Tanks

LOCATION
Iowa

APPLICATION(S)
Aggregate Piers / Vibratory Stone Columns (VSCs) for Ground Improvement

1ST CHOICE