

TorcSill is the premier provider of engineered Helical Pile and Anchor solutions to clients in a broad range of industries

**Project Type**  
Coker Unit  
Foundation

**Location**  
Texas Gulf Coast

### Executive Summary

The Coker Unit Foundation Project called into service many of the intrinsic attributes of helical piling foundation design and construction, including tight construction schedule, zero spoils generation and existing slab foundation remediation.



### Challenges

This particular coker unit produced 2-3 metric tons of coke every 12 hours, at which point the product was placed on a concrete slab and readied for loading onto rail cars. The 50+ year old failing slab foundation was more than 10-feet thick in places due to countless concrete repairs to compensate for sink holes and legacy excavation projects.

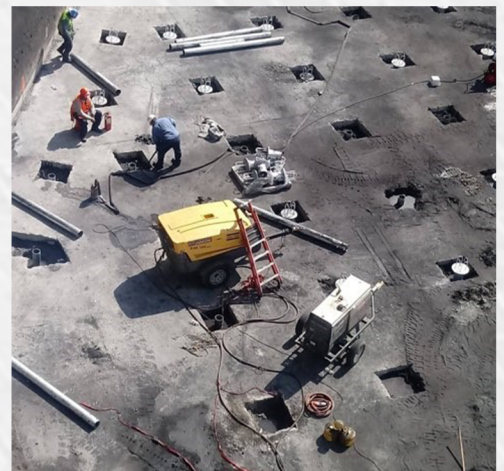
Rather than remove and replace the slab, the owner turned to TorcSill to design a helical system to support and tie in the existing and planned new slabs. The Project, covering 25,000 square feet was to be completed within an aggressive 30-day window, including design, manufacturing and construction.

### What We Did

Scrapping the original plan to remove and replace the slab, TorcSill Engineering designed a helical foundation solution that allowed the existing slab to be tied into a newly poured concrete slab.

Using custom designed and fabricated tension terminations (pile caps) and installing into saw cut holes in the existing slab, four TorcSill Construction Services crews worked day and night to install 210 helical piles to an average depth of 30 feet.

Working around the clock, the two shifts of two crews each beat the construction window of 15 days, coming in two days early at 13 total days on site.



### Solution

TorcSill's remediation design allowed the owner to maintain its 30-day design, manufacture and installation window, and resume production and product sales in the allotted time frame. In addition, the countless hours of labor eliminated, and mitigation of contaminated soils and concrete disposal saved millions of dollars over the original removal and replacement plan.



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