

SAVAGE FACILITY PORT ARTHUR, TX

CHALLENGE

Petroleum Coke Facility Stacker/Reclaimer Track Stabilization (2020-2021) 1,800 foot long track that supports stacker/reclaimer equipment weighting about 1.5 million pounds and material conveyor belt. Constructed in 1969 with crane rail supported on 32 foot long prestressed concrete ties spaced on 10 foot centers with three 8 foot long ties beneath each rail between the long ties. Only localized tie and subgrade maintenance had been performed in the 50 years since construction. Some locations in the track were significantly outside of the track grade profile (elevation difference between fixed points along one rail) and cross-level (elevation difference between rails) tolerances for the stacker/reclaimer operation.



SOLUTION

Purpose of the compaction grouting project was to restore stabilize the deteriorated subgrade beneath the track and bring the track to within new construction tolerances of +/-1/4 inch crosslevel and 1:400 (1 inch vertical in 33.33 feet horizontal) for grade and profile.



PROJECT SUMMARY

- » Stabilized the triple barrel box culvert and soils
Project began September 2020 and was completed April 2021 with approximately 3 week break in December 2020.
- » 1376 locations were drilled and grouted using 11,925 cubic feet (442 cubic yards) of grout material.
- » Grout pattern was 1 vertical and 1 diagonal underneath each rail of the long ties and 2 verticals under each rail of the center short tie.
- » Project completed two years ahead of schedule.

