



## CASE HISTORY

# US refinery decontaminates heavy organic polymeric sludge from heat exchangers resulting in a 33% reduction in outage time utilizing FQE® Solvent-PR+

## Results Achieved

Heat exchangers successfully decontaminated of heavy organic polymeric sludge to restore operational performance

33% reduction of allocated outage time

Saved hundreds of thousands of dollars in mechanical cleaning costs and associated outage time



## Chemicals Utilized

**FQE® Solvent-PR+**

In November 2017, a major American refiner located in Corpus Christi sought out a solution to dissolve heavy organic sludge containing polymerized material in a sulfolane unit.

During operation, the degradation of sulfolane produced a foulant consisting of heavy organic material and polymer.

Due to conditions at the plant the project needed to be completed within a short timeframe. To avoid any major economic setbacks, the refinery had to meet the following stringent conditions:

1. To utilize a product that could successfully dissolve the deposits
2. To meet a narrow window of 6 hours to fully clean a set of copper heat exchangers

Since other competitive products could not meet these criteria, FQE Chemicals was tasked with developing a new solvent product. The result was the

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development of FQE Solvent PR+. During the application, it was dispersed in a hydrocarbon cutter stock and heated to a temperature of 160-180°F. The material was circulated through the sulfolane unit until all the heavy organics and polymeric materials were fluidized. The project was deemed completed in 4 hours, thereby providing a 33 percent reduction of the allotted time frame.

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