

## Getting Back to Optimal Running Conditions



### THE CHALLENGE

Operating with 8 fluid catalytic cracking (FCC) feed nozzles which help convert hydrocarbons into lighter products, a Midwest U.S. refinery produces low-sulfur gasoline, gasoline blend stocks, ultra-low-sulfur jet fuel, petrochemical feedstock, and other byproducts.

When one of the FCC feed nozzles became partially plugged, it caused reduced rates and higher-than-desired backpressure on the feed side.

One partially plugged FCC feed nozzle compromised the operations of all the nozzles and required a solution to prevent suboptimal performance.

### THE SOLUTION

The RTI team sprang into action and sent the client Super Q®, a fast and effective hydrocarbon-based solvent specifically designed to dissolve heavier hydrocarbon foulants.

Support for RTI's Client Applied Program (CAP), which allows facilities to trim labor costs by purchasing patented chemistry for self-application, helped the operator rent an injection pump and RTI personnel walked the staff through using the pump and made sure the mechanical setup was primed for success.



### THE RESULTS

The Super Q® application successfully cleared the FCC feed nozzle and allowed the operator to get operations back to optimal running conditions.

In addition to solving the immediate problem, RTI made sure the client could be proactive in the future by setting them up with a quarterly routine maintenance practice on the unit that will help prevent future partially plugged FCC feed nozzles.

The operator reported that: "We did have success clearing the feed nozzle. Our feed backpressure dropped ~6 psig ... the other 7 feed nozzle flows all dropped ~500 BPD and the local pressure gauges in the field on the other feed nozzles all dropped ~6 psig."

### BREAKTHROUGH RESULTS

PLUGGED FEED NOZZLE CLEARED AFTER SUPER Q® INJECTION



### FLOW RESTORED

FEED CONTROLLER RETURNED TO STEADY FLOW AND BACKPRESSURE DROPPED ON THE FEED SIDE OF ALL FCC NOZZLES



### PRIMED FOR SUCCESS

CLIENT SET UP WITH QUARTERLY ROUTINE MAINTENANCE TO HELP PREVENT FUTURE PROBLEMS



### CONTACT

Jason Fox  
Program Manager – CAP  
jfox@r-t-i.com | 225-678-6067