



Case History

Natural Gas Processing Plant H₂S Optimization Program

ENVIRO-SCRUB[®] LM

Background

A natural gas processing plant was treating a stream with high H₂S content using competing H₂S scavenging technologies.

In the system, H₂S is removed by sparging the gas through a scavenging chemical solution in the sparge contactor. Once the H₂S monitor at the contactor outlet reaches a breakthrough point of 4ppm, the chemical solution is replaced.

The plant was looking to increase the run-time between change-outs, thereby reducing down time, maintenance, and chemical costs. Prior to Q² Technologies' involvement, four different H₂S scavenger technologies were tested with varying results. The run-time between change-outs for these trials ranged from 7 to 25 days.

System Data

Gas production:	126 SCFM average
Inlet H ₂ S:	1,300 ppm
Outlet H ₂ S:	<4 ppm
Pressure:	200 psig

Solution

Q² Technologies ran three separate trials with Enviro-Scrub[®] LM, using a different mix ratio for each test.

In the first trial, a mixture of Enviro-Scrub[®] LM and methanol achieved a 24-day run.

The second trial used Enviro-Scrub[®] LM with no dilution, and runtime increased to 28 days.

At this point an analysis of the replaced chemical revealed that much of it was un-reacted.

The treatment program for the third trial was optimized by diluting Enviro-Scrub[®] LM with water. The resulting chemical consumption rate was 100%, theoretical, and the run-time achieved with this optimized trial was 27 days.

Results

Enviro-Scrub[®] LM delivered longer runs than any other H₂S scavenging technology tested.

Based on an average of 20 days between chemical change-outs with competitive programs, Q² Technologies achieved a 35% increase in run-time, and a 35% reduction in change-outs per year.

With the Enviro-Scrub[®] LM solution, savings include less lost production, as well as reduced maintenance and chemical disposal costs.