

MC M-8041 and Process Improvement Reduce Costs

\$115,000 Annual Savings Achieved

BACKGROUND

A Central California Oil and Gas producer was expanding their drilling operations to include an additional 50 producing wells in the Tulare and Etchegoin formations. These well depths varied from 300' to 1800'. Due to the anticipated increase in gas production the customer upgraded their current H₂S separation tower. After the upgrade was completed the customer asked Multi-Chem to supply an H₂S scavenger for these towers. The customer was required to maintain a maximum allowable H₂S concentration of 1 ppm effluent of these towers. Multi-Chem recommended the use of MC M-8041 H₂S Scavenger.

ISSUES

The customer loaded each of the 2 towers with 250 gallons of a 50% dilution of MC M-8041 with water. Initial run times for the chemical to limit H₂S readings below the required 1 ppm threshold were about 5-7 days. Customer complained that the run times were significantly shorter than required to be economical and requested that the Multi-Chem representative make a recommendation to achieve acceptable chemical run times.

ANALYSIS

Multi-Chem representative questioned customer's engineering staff about the construction of the internal components of the new towers. During these discussions it was discovered that there were no sparger tubes present in the gas inlet internal to the tank. Multi-Chem recommended that the internal construction include sparger tubes to achieve a good uniform percolation for maximum scrubbing efficiency. The Multi-Chem representative recommended that the sparger tubes have a single plane of 3/16" holes about an inch apart and installed facing the bottom of the tower.

RESOLUTION

The operator emptied the tower and installed a single sparger tube as recommended. Then, the modified tower was put back into the production stream. The chemical run time was monitored to measure the effectiveness of the alteration to the tower. Run times increased from the original 5-7 days to 21 days. The operator was satisfied with the outcome.

DELIVERED VALUE

With initial run times of 5-7 days, chemical consumption would require 52 tower changes/yr. After the modifications recommended by Multi-Chem were made, tower changes were reduced to 17/yr. As a result of Multi-Chem's recommendation, chemical consumption of MC M-8041 was reduced from 13,000 gal/yr to 4,250 gals/yr, a reduction of 8,750 gals/yr or \$115,000/yr cost savings. This reduction in chemical consumption significantly improved the economics for removing H₂S from the fluid stream, allowing the operator to achieve the mandated H₂S emission limits at a significantly reduced cost.

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