

AcroClear™ Reduces Chemical and Tank Cleaning Expenses

TCO Reduced \$38.7K / yr for a 27% ROI

BACKGROUND

The operator wanted to improve the water quality and reduce the amount of filtration needed to treat the water. Millipore filter analysis would be used to evaluate the effectiveness of chemical treatments and to measure water quality. Additionally, the operator wished to eliminate hazards of H2S gas and control the rate of corrosion occurring on the water lines in the tanks. Removal of sludge build up in the tank bottoms was also desired.

ISSUES

Water filters constantly plugged requiring daily change outs. Acid soluble particulates (FeS) created poor water quality. H2S was as high as 3 ppm. Sludge in tank bottoms was 1 - 2 feet high. The tank bottoms showed signs of severe corrosion as did water lines from source wells into the main plant. An acid soluble film was forming inside of the water lines.

ANALYSIS

After the millipore filters were analyzed, it was determined that the solids plugging the filters and stacking in the tank bottoms was iron sulfide (FeS).

RESOLUTION

A process was designed by the local Multi-Chem team. First, isolate the tank being treated. A vacuum truck pulled 100bbls of water from tank and 55 gallons of S-2009 were added into vacuum truck while loading water. Initiate injection of AcroClear into water while vacuum truck is slowly pushing water back into the production tank over a 30 minute period. After completing treatment roll tank for at least 5 minutes with nitrogen to assure AcroClear is completely out of the discharge lines, and to provide agitation in the tank. Also, Do not open tank hatch without out a breathing apparatus on for at least 2 days.

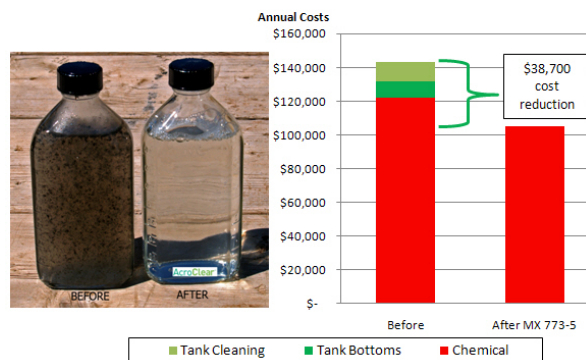
DELIVERED VALUE

Millipore filter tests: Before, 600 ml in 5 min; after 1000 ml in 3.5 min. 24 hours after treatment filter change outs were eliminated. Water color flowing from the filter pots changed from black to clear, with no detectable H2S. Sludge in the tank bottoms was completely gone.

12 days after treatment water clarity was still clear, but Millipore throughput was less, but had at pre-treatment throughput. The treatment also has helped reduce and improve water injection pressures.

Annual chemical costs have been reduced from \$122K to \$91K. Batch treatment cost was \$13.5K. TCO has been reduced by eliminating tank cleanups, saving \$21.6K/yr. This gives an ROI of 27% in the first year alone. Savings should increase to \$52K/yr by eliminating batch treatments.

AcroClear Reduces TCO and Cleans Water



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