

Chlorine Dioxide Cleans High Efficiency Cooling Tower Film Fill at Southwestern Gas Plant

Challenge

Microbiologically fouled high-efficiency PVC honeycomb type film fill has severely limited the heat rejection capability of this 4 cell cooling tower. In fact, the plant needed to flare in order to keep the upstream plant from reducing production.

The plant had plans to reduce production and shut down the tower cell-by-cell to physically clean and/or replace this fill.

Solution

Chlorine dioxide was fed at 5 mg/L (based on recirculation rate to this cell) to the riser of one cell for 48 hours to determine suitability of this type of treatment for microbiologically fouled high-efficiency film fill.

Results

Inspection of a single section of this fill, both before and after this 48 hour treatment, showed a substantial reduction in the amount of microbiological material present. Fouling increases exponentially with depth of fill.

Chlorine dioxide has been used successfully in a number of cases for the cleanup and subsequent prevention of biofouling in high efficiency film fill.

Courtesy by : [Siemens](#)