



ROGUE

PUMP COMPANY®
A LIMITED LIABILITY COMPANY

CASE STUDY: Poultry Processing Facility
LOCATION: Turlock, CA USA
PROJECT: DAF Wastewater System Upgrade
GOAL: Reduce TSS and BOD discharge
WORD KEYS: DAF, TSS, BOD, surcharge reduction



FACILITY BACKGROUND

The Foster Farms Turlock Turkey facility had been in operation processing turkeys for a wide retail market for many years. The plant is in production year-round and increases its volume dramatically during the run-up to Thanksgiving and the holiday season. The firm installed a DAF wastewater pretreatment system at the Turlock facility to reduce city discharge surcharges imposed on TSS and BOD effluent loadings. The company continued to seek equipment efficiency improvement solutions as surcharges increased and the aging overrun DAF worked to keep pace.



SOLUTION DESIGN

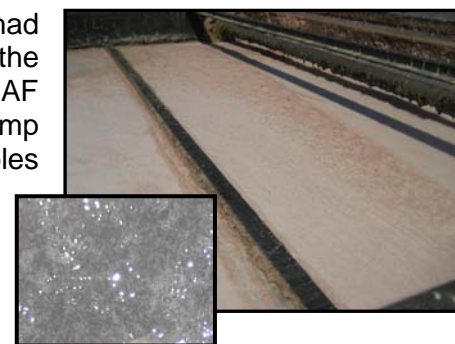
The old aeration system had several short-comings which needed to be addressed to achieve better treatment. Compressed air was fed directly into a pipe with distribution holes drilled in it located at the bottom of the DAF. Air was coarse providing little effective lift of the suspended solids. The solution was a new **MAX RGT™** regenerative turbine pump. This design would produce the 20-30 micron bubbles necessary for efficient suspended solids removal. The **MAX RGT™** efficiently achieves high air saturation in a single pass.



With the new pump technology a superior upgraded DAF would be the result. The new system entailed the pump, control valves, gauges and PVC piping. All were to be positioned conveniently beside the DAF adjacent to the effluent and influent points. The design recycled effluent water through the pump then reinjected it at the inlet.

FINAL RESULTS

RPC had the pump delivered and the Foster's maintenance crew had the **MAX RGT™** pump immediately installed. Upon start-up the upgraded DAF produced visible results. It was that obvious the DAF efficiency was increased with the **MAX RGT™**! The new pump produced very fine 20-30 micron bubbles. These micro bubbles captured the large portion of insoluble solids and effectively floated them to the surface. Plant personnel found they had a greater volume of captured solids which was drier and a more consistent sludge.



PAY-OFF

Foster Farm personnel are very satisfied with the upgraded DAF pre-treatment system. Discharges to the city have been greatly improved.

September 2008

By Stuart Ward