



# ROGUE

**PUMP COMPANY®**  
A LIMITED LIABILITY COMPANY

**CASE STUDY:** DAF Aeration Upgrade  
**LOCATION:** Little Rock, AR  
**PROJECT:** DAF Aeration Pump Replacement  
**GOAL:** DAF gas dissolution 20-30 micron bubbles  
**WORD KEYS:** DAF aeration upgrade, Regenerative turbine pump



## FACILITY BACKGROUND

The Odom's Tennessee Pride Little Rock facility inherited an aging undersized wastewater treatment dissolved air flotation (DAF) system. The old DAF aeration system needed replacing to create the 20-30 micron bubbles necessary for effective solids removal. The DAF pump was a centrifugal design producing large bubbles. These bubbles disturbed the sludge blanket that did form causing solids to fall out and get carried over into the effluent. Worse a recently replaced original pump lasted just 2 months before leaking. The pump was no match for the harsh conditions being made of cast iron. The pump corroded in the environment and solids caused immediate wear.



## SOLUTION DESIGN

RPC determined that the DAF would need replacing of the existing aeration system with a new AISI 316 stainless steel Rogue **MAX RGT™** regenerative turbine pump- a DAF upgrade was the answer. The DAF upgrade process entailed replacing the existing pump directly with the new Rogue **MAX RGT™**. The pump was positioned directly adjacent to the DAF next to the old unit. The new mechanical system was a compact layout design requiring less motor horsepower to operate and allowed the pump to fit neatly in the cramped space available. The new aeration piping system would recycle effluent water through the pump and efficiently achieve complete and consistent air saturation it in a single pass.



## FINAL RESULTS

RPC had the pump delivered on time from its factory inventory in Washington state. The Odom's maintenance crew had the Rogue **MAX RGT™** pump installed and leak-proof in short order. The new DAF upgrade produced fully saturated air upon start-up. The Rogue **MAX RGT™** pump produced very fine 20-30 micron bubbles which attached to the solids particles. These micro bubbles captured the large portion of the insoluble solids and effectively floated them to the surface. Significantly the DAF upgrade also improved the chemistry efficiency as well.

## PAY-OFF

Odom's is completely satisfied with the new Rogue regenerative turbine aeration pump. The DAF is now operating like never before and they are spending far less repairing it.



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May  
By Stuart Ward

2012