



ROGUE

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A LIMITED LIABILITY COMPANY

CASE STUDY: Potato Processing Facility
LOCATION: Heyburn, ID USA
PROJECT: DAF Wastewater System Upgrade
GOAL: Reduce TSS and BOD discharge
WORD KEYS: DAF, TSS, BOD, surcharge reduction

FACILITY BACKGROUND

Gem State Processing was a newly constructed facility producing dehydrated potato flake and flour. Saddled with an old DAF from a sister plant when production was started up, the maintenance crew struggled with the out-moded system. For months they tried everything to get the performance required by the POTW. Discharge TSS and BOD fees mounted along with frustration. The old DAF system had plenty of shortcomings which needed to be addressed to achieve better treatment. The most obvious was the defunct aeration system producing non-functional large bubbles. Gem State explored repair or replacement but that option was cost prohibitive as the pump is a foreign make and support sparse.



SOLUTION DESIGN

Finally a Rogue **MAX RGT™** regenerative turbine pump was installed to upgrade the DAF aeration system. The replacement aeration system was a new AISI 316 stainless steel **MAX RGT™** regenerative turbine pump. The pump uses triple action force for superior gas dissolution efficiency. The pump was positioned conveniently below the DAF deck adjacent to the effluent chamber. The design recycled effluent water through the pump and achieved full saturation in a single pass. A side-by-side performance comparison with the old pump (pictured on the left) convinced all concerned the **MAX RGT™** was the best way to go.



FINAL RESULTS

RPC had the pump delivered quickly from its inventory. Gem State Processing had the **MAX RGT™** pump installed with consultation. A factory representative made a special point of visiting the facility both during installation and again later after the system had been running for some time. Upon start-up the upgraded DAF with the **MAX RGT™** produced great results. DAF BOD removal increased by multiples immediately. 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 drier, more consistent sludge. They also found the system used less chemistry with far better TSS removal results.



PAY-OFF

Gem State Processing personnel are very satisfied with the **MAX RGT™** system upgrade. Discharge surcharges have them smiling and in compliance with the city.

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