IMPROVED SOLIDS HANDLING TREATMENT USING BAE[™]

OPERATIONAL EFFICIENCY CASE STUDY

FACTS

- Average daily flow of 60 MGD
- Secondary treatment process
- Four Digesters
- Cannon style bubble mixers

TREATMENT OVERVIEW



The plant handles an average flow of **60 MGD** of sewerage. The facility has 4 digesters. Each of the four digesters (1.77 million gallons each) employs floating covers to collect and store the gas which is generated in the digestion process. The digester mixing system consists of ten 30-inch cannon style bubble mixers.

PROJECT INTRODUCTION



The plant wanted to improve their costing structure in the solids treatment section due to the increasing costs of chemical treatment, landfill tipping fees and disposal costs. It was anticipated that adding BAETM to the treated solids coming from the digesters would improve the solids handling treatment by lowering these costs and producing:

- Higher Cake Solids
- Cleaner Return Stream
- Lower Final Disposal Costs

Plant Centrifuge

BAE™ was introduced at the plant's Gravity Belt Thinkeners.

RESULTS SUMMARY



Reduction of TSS returned to Treatment Plant (3,557-1,708=1,849 mg/L) 9.3 million gallons per month at \$410 per ton (cost allocated to TSS Treatment only).

- ANNUAL SAVINGS ON RETREATMENT COSTS: \$352,793
- CAKE SOLIDS INCREASED FROM 23.1% TO 23.5%
- LESS POLYMER USED TO ACCOMPLISH DEWATERING RESULTS

Sludge Cake removed for disposal decreased from 85.07 tons per day to 82.79 tons per day.

• A REDUCTION OF 2.28 TONS PER DAY (reduced tipping fees)





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