

Sweetness From the South

Mountaintop Baking Company, nestled in the hills of eastern Kentucky, has chosen anaerobic pretreatment again. The company, owned by Kelloggs, has been expanding production capacity during the past few years and is doing another major expansion. This latest expansion is slated to begin operation in 2000.

The plant produces Nutri-grain bars and Pop Tarts. The increased production will bring with it an increase in effluent flows and organic loads. The wastewater contains a number of ingredients from the baking process. Sugars used in the pastry fillings contribute a significant amount of the organic load to be treated.

Mountaintop, which began production at this facility in 1990, originally installed a packaged anaerobic/aerobic treatment system. Due to the wastewater's high strength, anaerobic treatment was included as part of the overall treatment train. This has proven to be both a good and logical choice. The packaged system performed very well but with the expansions, it was time to upgrade the treatment capacity.

ADI was contacted in late-1998 to review Mountaintop Baking's treatment needs, and a proposal for upgrading the plant was submitted in mid-1999. The proposed



Hybrid and SBR under construction

upgrade included an 80,000-gallon anaerobic hybrid reactor followed by a 78,000-gallon aerobic sequencing batch reactor (SBR). The proposed system also integrated well with the existing system and made as much use of it as possible.

ADI was awarded a design/build contract in September 1999, and the upgraded system will be commissioned in March 2000.

The upgrade is designed to treat 20,000 gal/d of industrial effluent at a COD strength of 40,000 mg/ℓ and 5,000 gal/d of domestic wastewater. The final effluent will be discharged to a local creek, meeting 15 mg/ℓ BOD and 7 mg/ℓ dissolved oxygen concentration requirements.

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