Installation Update!

New Bio²Bloc System For Nitrification at Winfield, AL

After reviewing various technologies that would provide the ability to reduce ammonia effluent to state permit levels, the Town of Winfield, AL, decided to upgrade the plant with a new Bio²Bloc system. Winfield operates a huge, single-cell lagoon system, with an average operating depth of 6.5 feet. The plant sought a treatment system that would have a low energy input, and could be installed while the plant remained in operation. The wastewater treatment plant serves a community located in a rural area in northwestern Alabama.

Based upon the reduction of allowable ammonia effluent , the Town's engineers (Hendon Engineering Associates, Birmingham, AL) prepared a funding application with the USDA's Rural Development office. Working with Hemphill Construction, General Contractors, FBC Technologies installed a system consisting of 24 Bio²Bloc units, designed to operate at depth of 5 feet. Each unit has a biomass volume of approximately 60 cubic feet, and require an airflow of 15 SCFM per unit. The entire system is supported by one small blower, producing 360 SCFM for the entire system. Periodic backflushing of the media beds is accomplished through FBC's patented dual-diffusion system, designed to send all the system air through a few units at a time by manipulating manifold valves on the shore.

This project was installed in March 2009, bringing the town into compliance with their ammonia permit. The system will also provide the town with ready denitrification capability in the future, if requirements eventually require this additional level of treatment.

Dual Diffusion System for Easy Backflush of Media Bed

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