

Case History 26—Municipal Ammonia Removal

New Bio²Bloc System Installed at Wiggins, MS



The City of Wiggins, MS, operates a large 3-cell lagoon system designed to serve the needs of their community of 3,800 people. With a flow rate that averages 120,000 gpd, the plant had traditionally operated several “brush” aerators to circulate and aerate the water.

Based upon the flow of the effluent into a recreational waterway, the City’s engineers (W Engineering, Wiggins, MS) filed a grant application with the US Army Corps of Engineers for a series of improvements

around the plant, to include resurrection of the final settling / treatment cell, and equipping that cell with a small Bio²Bloc system to bring ammonia discharge into compliance with the plant’s SPEDES permit. A system containing 12 units was originally designed, but reduced to 4 units after all Corps’ projects were reduced in the aftermath of Hurricane Katrina.



FBC completed this installation for the City of Wiggins in August 2006. Two small blowers, operated on alternating cycles, support the installation, for the sufficient polishing of ammonia to bring the City into compliance with its SPEDES discharge permit. The project was installed with SCI, Inc., General Contractors, located in Gulfport, MS.

Given the modular nature of the Bio²Bloc system, the City will continue with the installation of the remaining 8 units in the system, as funding becomes available from the Corps in the near future.