



## Case Study:

# Al Wathba STP, Abu Dhabi, UAE

The newly-constructed Al Wathba ISTP2 sewage treatment plant has a waste processing capacity of 84.5 MGD, and is designed to handle sewage from over 1.5 million homes in the rapidly growing city of Abu Dhabi. The treatment of this wastewater generates significant amounts of odorous air which requires treatment to meet with the Emirate of Abu Dhabi's stringent air quality permits.

Before BioAir's involvement, the site was utilizing a centralized chemical scrubber that used large quantities of expensive, hazardous chemicals for odor treatment. The Operator of the facility was looking to continue its commitment to sustainability while minimizing operating costs. They chose the **BioAir Complete™** process to develop a design basis, then define and provide the optimal treatment solution.

BioAir visited the site, analyzed the facility's processes and odors, then designed a custom-tailored solution for the site's unique needs. The design called for eight EcoFilter® EF133 biotrickling filters, which would replace the existing chemical-based odor control system with innovative, environmentally-friendly, sustainable biotrickling filter technology. EcoFilter units feature BioAir's breakthrough, patented EcoBase® structured, synthetic biotrickling filter media, which eliminates H<sub>2</sub>S and organic odors through biological means, without the use of any hazardous chemicals or other expensive consumables.

BioAir fabricated, delivered, and fully-installed the custom equipment, then trained the operating staff, and started up the system for the first time. The results were remarkable.



Equipment:	Eight (8) EcoFilter® EF133
BioAir Scope:	Turnkey
Odor Source:	Various WWTP Sources
Airflow:	88,300 cfm (150,000 m <sup>3</sup> /hr)
Actual Inlet H <sub>2</sub> S:	97.3 ppmv
Avg. Outlet H <sub>2</sub> S:	0.047 ppmv
H <sub>2</sub> S Removal Efficiency:	99.95%

## Case Study Results:

Within two weeks of startup, the system was handling the complete design airflow, and performing above guaranteed levels. The performance of BioAir's systems and its people exceeded Al Wathba's expectations on all fronts. "This flagship project is a great success, and we are proud to be associated with the world-class BioAir technology and team," said Erich Konig, General Manager.

Just as exciting as the system's performance are the financial benefits: the BioAir equipment is projected to pay for itself in operating cost savings in under 5 years.

Thanks to BioAir Complete and EcoFilter biotrickling filter technology, the Operator of Al Wathba STP has furthered its commitment to sustainable technologies, has eliminated the high operating expense of using hazardous chemicals, and has put in place an environmentally-friendly solution that has exceeded all expectations.

