Integrity MUNICIPAL SYSTEMS

PROJECT PROFILE: Al Bustan, Saudi Arabia

Olayan Voltas Chooses IMS Biological Odor Control Systems to Protect the 2013 Sustainable GCC Project-of-the-Year from Odors

Olayan Voltas Contracting Company was awarded the 2013 "Sustainable GCC Project-of-the-Year" by *MEP Middle East* magazine for the utility complex at Al Bustan Village, a brand new residential community north of Riyadh, Saudi Arabia. The new community stretches across more than 160 acres and contains 838 residential units including villas and apartments, as well as a sports and recreation complex, planned hotel, shops, gardens, and playgrounds.

A critical objective of this unique project was to ensure that the residents of Al Bustan Village would be protected from annoying odors generated by the Village's SBR. Voltas sought a proven technology capable of meeting the demands of this important project, as well as a technology offering maximum value measured by performance, reliability, capital, installation, maintenance, and operating costs. Integrity Municipal Systems (IMS) was asked, together with other selected suppliers, to propose and provide the best sustainable, environmental odor control solution.

"I must say that of all my suppliers on this project, Integrity Municipal Systems was the only one that responded so fast to our needs and executed this project in such a professional way."

Munawwar Malim
Senior Project Engineer of OVCC,
Riyadh K.S.A.
Al Bustan Utility Plant

Based on the project's design criteria, IMS prepared comparison tables with technology analyses emphasizing the advantages of a hybrid biological system over traditional chemical and activated carbon systems. A two-stage biological system featuring superior performance, compact plug-and-play design, long-lasting inert media, and low operating costs was selected.

Based on the specification, odor control equipment had to be installed at both the headworks and the lift station. For the lift station, IMS specially designed an I-BOx™ 42 with high capacity media in the second stage to ensure high removal efficiency even at inlet H_2S concentrations of 150 ppm. Similarly, for the headworks an I-BOx™ 7000 was selected to treat 1850 m^3/h of odorous air while delivering less than 0.1 ppm of H_2S at the outlet.

Timing was also a very crucial aspect of this project. The lift station unit was required to be delivered in Saudi Arabia one month after design approval, and a two and one-half month deadline was mandated for the second unit at the headworks. This was a great challenge for IMS because both systems were manufactured in the United States and required shipment to Saudi Arabia on a tight timeframe. IMS managed to airfreight the first unit within the specified deadline and successfully delivered the second unit by ship within the client's expectations. Commissioning and operators' training took place just five days after notice from Voltas that the systems were ready for start-up. Munawwar Malim, Senior Project Engineer of OVCC, Riyadh K.S.A. for Al Bustan Utility Plant - (Mechanical Head), said of IMS, "I must say that of all my suppliers on this project, Integrity Municipal Systems was the only one that responded so fast to our needs and executed this project in such a professional way."

I-BOx™ 42 at Al Bustan Lift Station

I-BOx™ 7000 at Al Bustan Headworks

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