

UPGRADE OF SEWAGE TREATMENT PLANT

AL HAYER WWTP - DECENTRAL SEWAGE TREATMENT

Abu Dhabi Sewerage Service Company ADSSC builds & operates several treatment plants for municipal sewage in the town area of Al Ain, the largest inland city of the UAE, known as the "Garden City of the Gulf" due to its greenery in middle of the desert. The town is growing fast and the sewage treatment was in need of upgrade as well as considerations of water reuse for irrigation.

Upgrade and Rehabilitation of SBR System

To solve this situation, extension of treatment capacity by 300%, referred to original plant size was necessary.

MENA-Water was challenged to do the final design, installation and commissioning of these plants at a brisk pace. Precise planning was required to execute this upgrade without affecting or stopping the existing treatment process.

Installation works included diversions, pumping stations, complete pre-treatment, biological treatment such as SBR process and tertiary treatment with media filters, dosing, disinfection and sludge treatment.

Water for Re-Use in Irrigation

18 Months of installation works saw the plants commissioned successfully in December 2018. Entire processes are operated by SCADA controls and observed through an online monitoring system 24/7.

Treated water is stored at site and pumped into an irrigation network for improving the greenery in this desert area.

**UPGRADE
WWTP PLANT
to
triple
capacity**



شركة أبوظبي لخدمات الصرف الصحي
Abu Dhabi Sewerage Services Company



Headwork

Upgrade & Rehabilitation of 3 WWTP Plants in Al Ain

SBR Sewage Plant: Al Hayer WWTP	Upgrade & Rehabilitation to 3900 m³/d (enlarged to 312%)
Application	Effect
Plant Drain Pump Station	Tanker Discharge & Site drain
Complete Headwork	Removal of screenings, grit & grease
Balancing Tanks with Cover	Homogenization and buffering
SBR- Sequential Batch Reactors with Blowers	Biological activated sludge treatment
Pressure Media Filters	Filtration of treated water
Chlorine Dosing System & Chlorine Contact Tank	Disinfection of Effluent
Odour Control System	Removing H ₂ S and harmful gases
TSE Storage Tanks and Pump Station	supplying irrigation network and tanker filling
Sludge Thickener Tank with Lime Dosing	Sludge dewatering & pH stabilization
Control Panels / PLC / SCADA	Fully automated control and plant monitoring



Sewage Plant with 3 SBR Tanks



Auto-Sampling