



شركة أبوظبي لخدمات الصرف الصحي
Abu Dhabi Sewerage Services Company

UPGRADE OF SEWAGE TREATMENT PLANT Al Quoa WWTP

REMOTENESS

Al-Quoa remoteness bordering Oman with the largest treatment capacity upgrade envisioned. Remoteness meant that all material sent to site had to be accurate to avoid unnecessary delays. MENA-Water was challenged with the logistics due to these remote location upgrade.

Completeness of new plant prior to refurbishment

Extension of treatment capacity by 267%, referred to original plant size was undertaken.

Whole new replacement plant had to be installed and commissioned prior to refurbishment.

Existing incoming sewage lines were 10 meters deep and diversions required additional planning and specialized diversion techniques using inflatable balloons. Additionally, the sewage to the plant came from two different pipelines which had to be integrated before pre-treatment.

Volume of work in Al Quoa was the biggest and needed additional resources to complete the new plant in time. New plant design used the Extended Aeration, Clarification, Tertiary Filtration and Disinfection to integrate the new expansion facilities with existing facilities in staged manner.

Integration of new and existing plant

Combining the new plant and refurbished plant to have common TSE discharges required MENA-Water to integrate old and new TSE facilities to have common TSE pump station. Operating both the different plants require skilled operators and different treatment principles and constant monitoring.

UPGRADE
WWTP PLANT
to
267 %
capacity



Headwork

Upgrade & Rehabilitation of 3 WWTP Plants in Al Ain	
Extended Aeration Plant: Al Quoa WWTP	Upgrade & Rehabilitation to 4480 m ³ /d (enlarged to 267%)
Application	Effect
Inlet Works Pump Station	Tanker Discharge & Site drain
Combined Headwork	Removal of screenings, grit & grease
Aeration Tanks	Biological activated sludge treatment
Clarifiers	Settling and Effluent removal
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 Active Sludge Process



Plant Control