

Client
Sharjah Electricity and Water
Authority

Location
Sharjah, United Arab Emirates

Contract Value
US\$10 million

Project Completion
2007

CH2M HILL Role
EPC Contractor

SEWA Seawater Reverse Osmosis Plant at the Kalba Station



CH2M HILL is serving as the single source of responsibility for engineer-procure-construct (EPC) services for turnkey delivery of a 14,000 m³/day Seawater Reverse Osmosis (RO) treatment plant. Scope of work includes:

- Engineering Design
- Procurement
- Mechanical and Electrical Erection
- Guarantee of water output
- Guarantee of electricity consumed per m3 of produced desalinated water

This facility is located on the Indian Ocean coast of the United Arab Emirates and will include ultrafiltration (UF) membrane pre-treatment. Pressurised UF membranes will be protected by upstream passive screening and prefiltration screens. UF pre-treatment is the state-of-the-art SWRO pre-treatment and pilot studies are ongoing at the site to optimize design parameters of the pre-treatment system. The seawater RO system will utilize high efficiency pressure exchangers for energy recovery resulting in very low energy consumption.

The RO plant capacity is 3 MIGD (3.6 mgd).