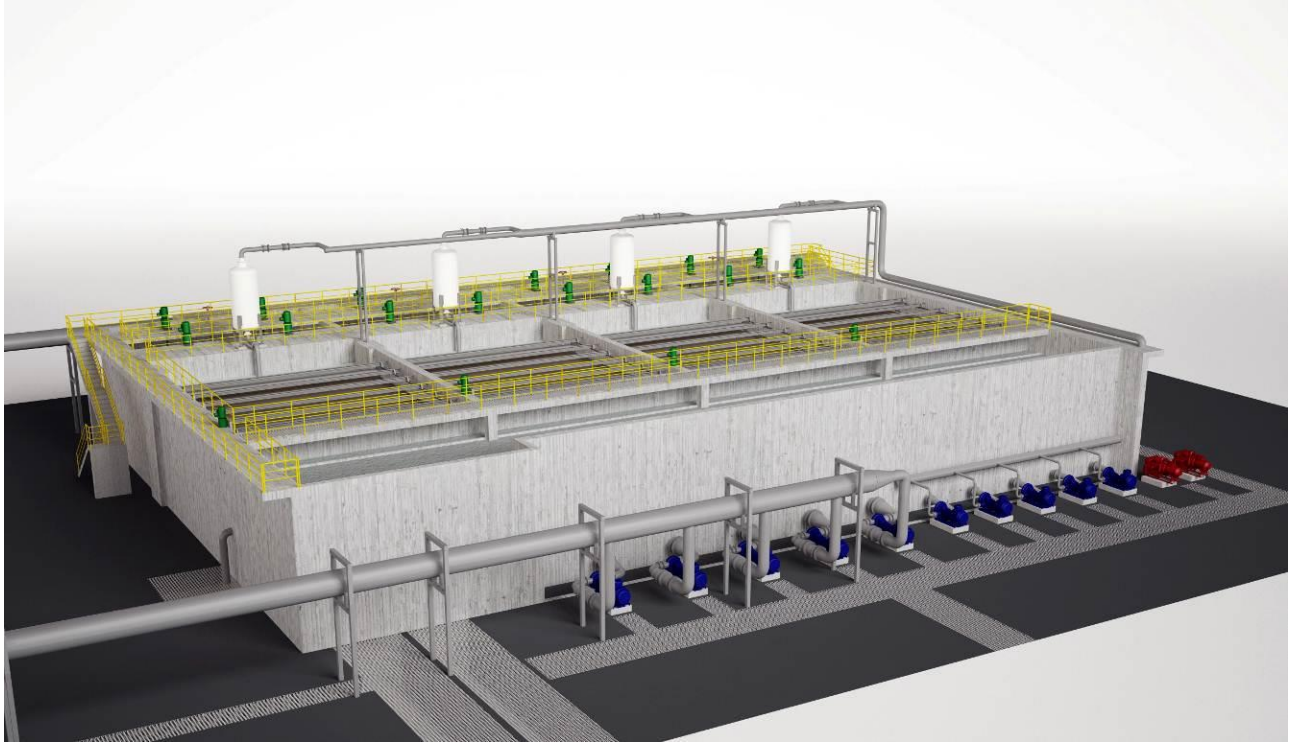
Case history brief:

Location:	Al Zawarah – Ajman, U.A.E.
Application:	Seawater desalination
Capacity:	5060 m^3/hr
Clarification:	Suspended solids removal
Chemicals:	Coagulant and polymer
Installation:	2013

Case history features:

The main purpose of the plant is to reduce the Total Suspended Solids (TSS) during a red tide event. This periodic development of red tide algae might occur once or twice per year in the warm sea water, increasing dramatically the TSS concentration up to 30 mg/l and even more. Consequently, the primary filtration facility (traditional Sand Filters, Double Media Filters or Ultra Filtration membranes) plug very quickly and so the regular feeding of the Reverse Osmosis membranes becomes problematic.



One of the best ways to eliminate these red tide algae is Dissolved Air Floatation (DAF) in combination with appropriate coagulation/flocculation physic-chemical treatment.
KWI installed, with this purpose, 4 UNC BF110 units.

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Usually the algae reduction during a red tide event is more than **95-98%**.
Typically the TSS are reduced down to **2-5 mg/l**.

The DAF technology eliminates efficiently also oil and other organic components (Total Organic Carbon) that might be found in the sea water.

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