



Q-SEP® Powers 20 MLD TTRO Plant for a State Industrial Development Corporation in Southern India

QUA®

Client: State Industrial Development Corporation in Southern India

Plant Capacity: 20,000 m³/d RO product water

Challenges:

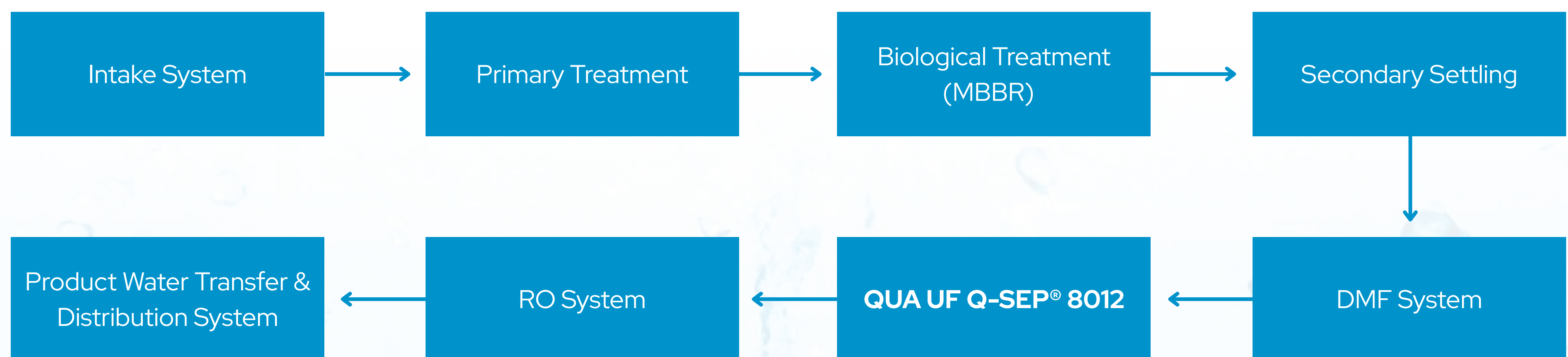
State Industrial Development Corporation in Southern India, a government agency focused on industrial development, needed a continuous supply of treated water for industrial operations, but the nearby available dam water was heavily polluted and unfit for direct use. To make it usable, the water required comprehensive treatment to ensure an uninterrupted industrial supply. The raw water contained elevated levels of dissolved solids (1,300 mg/L TDS), biochemical oxygen demand (30 mg/L BOD), chemical oxygen demand (100 mg/L COD), and total suspended solids (50 mg/L TSS).

Client needed a membrane solution provider capable of pretreating this water with minimal power and chemical consumption.

QUA's Solution:

QUA's Q-SEP[®] (Outside-In) hollow fibre ultrafiltration membranes were selected for their high performance and consistent ability to meet and exceed the treated water quality required for RO feed. Their low-pressure operation, seamless integration after secondary treatment, optimal flux, high membrane surface area, and compact footprint made them an ideal choice for the application.

Flow Diagram



Membrane System Design

QUA UF Model	No. of Modules	Nominal Pore Size (Microns)	Permeate Flow	Feed Water Turbidity (NTU)	Product Water Turbidity (NTU)
Q-Sep [®] 8012 (Outside-In)	4x 48 x 2 Phases	0.04 micron	562 m ³ /hr x 2 Phases	20	0.1

Results

QUA's Q-SEP[®] 8012 (Outside-In) membranes delivered consistently high-quality treated water, with clear output and turbidity maintained between 0.1 and 0.2 NTU. SDI remained well below 3, while low transmembrane pressure (under 0.5 kg/m³) enabled highly efficient energy performance. The system consistently delivered a permeate flow of 562 m³/hr per phase.

Treatment process reduced TDS from 1300 ppm to below 150 ppm and completely removed BOD, COD, and TSS. The project met its timelines across all milestones and is in accordance with the committed power & chemical consumption. This solution ensures a reliable water supply in this key industrial region to support uninterrupted business operations.