



**QUA's EnviQ® RF 30 Improves
STP Performance and Water
Reuse in One of India's Leading
Commercial Hubs**



Client: A leading commercial hub, Noida, India

STP Capacity: 12.5 m³/hr

A prominent commercial hub in Noida with corporate offices, co-working spaces, and multinational companies needed an efficient sewage treatment solution to manage wastewater generated from daily operations. The facility required consistent treated water quality for regulatory compliance and internal reuse. To improve the efficiency and reliability of its existing sewage treatment plant (STP), the client sought an advanced membrane solution capable of delivering stable long-term performance under varying wastewater conditions.

Challenges:

The existing MBR system was struggling to handle fluctuating wastewater loads and growing treatment demands. Frequent membrane fouling, rising TMP, unstable treated water quality, and high cleaning requirements were causing increased downtime and operating costs.

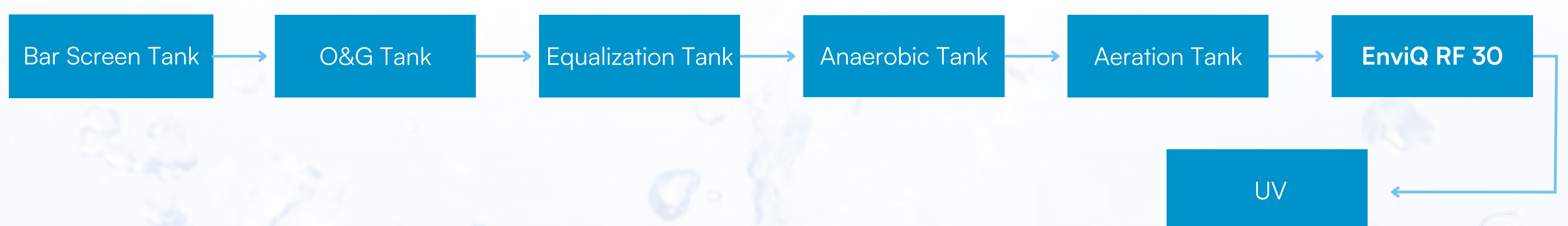
Moreover, the mechanical strength limitations of the existing MBR membranes led to potting issues and fiber breakage, impacting overall system stability. The facility thus needed a more reliable and efficient membrane solution that could deliver stable performance, reduce maintenance efforts, ensure consistent water quality, and well-fit within the available plant space.

QUA's Solution:

QUA's EnviQ RF 30, a reinforced fiber ultrafiltration membrane was selected as the preferred retrofit solution due to its compact, ready-to-install design and compatibility with the existing STP configuration, enabling quick installation with minimal disruption to plant operations. Reliable ultrafiltration-quality effluent, faster delivery timelines and reliable after-sales support also played a crucial role in its selection.

Its reinforced PVDF hollow fiber membrane and dual airflow distribution system are designed to provide strong fouling resistance, stable TMP performance, reduced cleaning frequency, and reliable ultrafiltration-quality effluent under varying wastewater conditions.

Process Diagram



Parameter	STP Inlet	EnviQ RF 30 Permeate
BOD (mg/L)	300 - 400	<5
COD (mg/L)	550 - 600	<50
TSS (mg/L)	250 - 300	<5
Turbidity (NTU)	NA	<3
Ammonia (mg/L)	30	<5

Results

After installing EnviQ RF 30, the sewage treatment plant achieved more stable filtration performance with lower fouling and consistent treated water quality. It also helped:

- Reduce cleaning frequency
- Improve overall plant efficiency
- Lower maintenance efforts
- Perform reliably under high MLSS conditions
- Handle varying wastewater loads more effectively

QUA's membranes enabled up to 95% water recovery while meeting local discharge and reuse requirements, significantly reducing freshwater consumption. The treated water is now reused for toilet flushing, making EnviQ RF 30 an effective retrofit replacement for underperforming MBR membrane systems.