Typical Arrangement

- Separate mixing and aeration allows biomass conditioning and nutrient reduction by alternating aerobic and anoxic periods
- Following settling, supernatant from the reactor (first barrier) is transferred to the cloth media filter (second barrier)
- Inlet water passes through the second barrier
- Filtered water is collected in the filter's center tube and directed to the ultrafiltration membranes (final barrier)
- Flow enters the membrane modules where low positive pressure enables fluid to permeate membranes, excluding particles down to 0.02 micron
- Filtrate is taken from the side port and directed to final discharge
- The filter is backwashed briefly whenever the pressure drop across the cloth increases above its setting
- The membrane is backwashed whenever the filtration time expires
  - During backwash, filtrate flow is reversed to flush the solids to drain
  - The membrane undergoes chemically enhanced backwash to dissolve contaminants that have not been removed with backwashing