

Ecopetrol Refinery - UF/RO Plant



Owner/Client: EcoPetrol S.A.

Location: Barrancabermeja, Columbia

Capacity: Ultrafiltration 10 MGD; RO 5.9 MGD

Start-up: 2013

Application: Oil refinery; water reuse; boiler feed



The advanced water treatment plant designed, fabricated and supplied by SWT produced low TDS water to feed the plant's ion exchange system. The system consisted three submerged ultrafiltration trains capable of producing 10 MGD of filtrate. As well as three, double pass, brackish water RO trains capable of producing up to 5.9 MGD of permeate. The RO trains were designed to minimize the plant footprint; stacking the second stage on top of the first stage. Also high pressure feed pumps, transfer pumps, low fouling membranes, instrumentation and PLC control system. Field services included installation supervision, system testing, commissioning and start-up as well as training personnel.



Operational Data:

- Feed water TDS: 237 ppm after UF
- Permeate TDS: 0.15 ppm
- Permeate flow: 1,374 gpm per train
- RO Recovery: 77.5% / 87%