

2008 Case Study

Industrial Brackish Water Reverse Osmosis Unit

Major Water Treatment Company, Northern California, USA



INTRODUCTION

In July 2008, Pure Aqua successfully supplied Industrial Brackish Water Reverse Osmosis (BWRO) system to produce 144,000 GPD of product at 77°F using (20) 8"x40" Hydranautics ESPA1 membrane elements, (4) 5M FRP pressure vessels, SS multistage Grundfos CRN pump, microprocessor based controls and a digital conductivity and ORP read out, 460V/3ph/60Hz.

SYSTEMS & PROCESS

Pre-treatment of raw water includes antiscalant dosing to minimize the precipitation of sparingly soluble sulfate salts, sodium bisulfite (SBS) dosing to remove free chlorine in the feed water.

The Brackish Water Reverse Osmosis system was selected from our RO-400 Series. BWRO unit consists of 5-micron cartridge filters to reduce feed water Silt Density Index (SDI) and to limit the SS to 5-micron size.

PERFORMANCE

From a feed TDS of about 1,000 mg/L at a temperature range of 19°C and 27°C, the BWRO skid produces 100gpm of drinking water with TDS less than 50mg/L.