

# C A S E S T U D Y

## APPLICATION OF MEMBRANE TECHNOLOGY IN THE DEVELOPMENT OF "MARGINAL" WATER SOURCES

Many factors are contributing to the increasing awareness in Australia, particularly in rural areas, for the need to accelerate the development of water sources that until recently have been considered "marginal" – most specifically desalination of brackish ground and surface waters and reuse of properly treated municipal and industrial wastewater and effluent streams. The successful utilization of these sources – while meeting the various health and environmental regulations and standards – requires the application of advanced water treatment technologies.

Among these, membrane technologies are emerging as highly suitable for the tasks at hand, predominantly reverse osmosis (RO) and micro or ultra-filtration (MF, UF).

Amiad Water Systems can provide cost-effective water and effluent treatment solutions utilizing RO and UF membrane technology. We will utilize our years of experience in this field to design, manufacture and supply an optimal, tailor-made system to meet project specific requirements.

### **Marribank Aboriginal Community**

The Marribank Aboriginal Community is located in the southwestern part of Western Australia. As part of the efforts of the Australian government to upgrade the living conditions of the Aboriginal peoples, it was decided to install a water treatment system,

which would provide a consistent, high quality supply of drinking water from an existing brackish borehole.

A 50cum/day containerized desalination system was supplied to produce water meeting the Australian Drinking Water Guidelines.

The system was built using Reverse Osmosis technology and post chlorination was provided to produce safe drinking water for the Aboriginal community.

The complete system, including a water boosting system and a pressure tank, which provided pressurized water supply to the community upon demand, controls for the adjacent bore pump, was installed in a standard 20 ft. ISO shipping container, allowing for quick and simple installation onsite, with no need for a separate building and safe from break-in.

**Date of commissioning:** August 2004



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