

Recycling plant nears completion in Victoria

The first stage of the Black Rock Recycled Water Plant is nearing completion in Victoria.

In February, utility Barwon Water announced that the project is 95% complete with completion expected in the middle of this year.

The facility will take secondary effluent from the Black Rock Water Reclamation Plant and pass it through an advanced treatment process, which will include ultrafiltration, reverse osmosis, ultraviolet disinfection and chlorination.

The plant will produce around 3000ML/a of Class A recycled water a year for housing developments at Armstrong Creek and Torquay North. In the 22,000 lot Armstrong Creek development, a dual-pipe scheme will use recycled water for gardens, toilets and recreational areas.

The facility will also produce 2000ML/a of moderate salinity Class C recycled water for agriculture and recreation. It will also decrease discharges to Bass Strait. Barwon Water aims to achieve 25% recycled water reuse by 2015.

Construction of the facility began in January 2012. John Holland is the contractor. KBR and MWH are the key consultants



The Black Rock Recycled Water Plant will produce Class A water for housing developments and Class C water for agriculture and recreation.

for civil and process design respectively.

The first stage of the plant has an estimated cost of \$42 million, with the federal government providing \$10 million. ■

Electrolysis for disinfection advocated

The use of electrolysis for oxidation and disinfection of wastewater has been advocated by Kerry Gosse, managing director of Queensland water equipment company Australian Innovative Systems.

Gosse said that electrolysis is an alternative method of treating wastewater that reduces the use of chemicals. "Safer, environmentally friendly, cost effective and almost maintenance-free alternatives are readily available," he said.

Joe Ebono, general manager of Simmonds & Bristow, a Brisbane water and wastewater analysis, consulting and process design company laboratory, agrees. "We are always looking for ways to minimise power consumption and keep the environment as clean as possible. With the impact of global warming and the need for fresh water, solutions like AIS's in-line systems and technology are an important part of creating a sustainable way of treating sewage and producing clean water in the future."

AIS designs and manufactures on-site electrolysers and chlorine generators for disinfection and/or oxidation of freshwater or industrial wastewater high in biochemical/chemical oxygen demand, turbidity, odour, pathogens or other contaminants.

The company's products include the Ecoline range of units, which convert dissolved salts in the water into mixed oxidants such as hypochlorites, ozone, hydrogen peroxide, chlorine dioxide, peroxodisulfate, peroxodicarbonate, hydroxyl radicals and oxygen.

On Macleay Island in Queensland, an Ecoline unit is used to treat overflow from private septic tanks to Class C standard for subsurface golf course irrigation. The system has a capacity of up to 23kL/d.

In Ontario, Canada, Lashbrook Egg Products uses an Ecoline unit to reduce turbidity, biochemical/chemical oxygen demand and odour, and remove pathogens prior to discharge into the municipal sewer. The system capacity is up to 170kL/d. ■