Aussi Dairy Turns to ADI for Waste Treatment

In late 2004 Murray Goulburn, a large dairy cooperative in Australia, selected ADI Systems Inc as the successful tenderer for a design-build contract to provide wastewater treatment. Being an overseas project, it is unusual for ADI to hold the contract with the customer, but that is the case with this project. The design work started in 2005, and construction will be completed in 2007. The work comprises equalization, anaerobic treatment, and aerobic treatment, providing a very high quality effluent for discharge to the local water authority.

In order to provide a carbon source for denitrification, a fraction of the existing dissolved air flotation effluent bypasses the low-rate Type L anaerobic BVF® digester and enters the ADI-SBR (sequencing batch reactor), which also treats the anaerobic reactor's effluent. Excess biosolids (waste activated sludge) from the SBR is pumped to the BVF reactor, where it is anaerobically digested.

Magnesium hydroxide is the chemical used for pH-alkalinity control. Jet aeration (600 kW installed) is employed to supply air to the SBR tanks, and two Model ADI-ASD-10 decanters are used to remove clear effluent.

The raw wastewater characteristics include a COD of 6500 ppm, a BOD of 4000 ppm; suspended solids, 1300 ppm; FOG, 500 ppm; and over 300 ppm of total nitrogen (TN). The projected effluent characteristics are as follows: COD, 60; BOD, 10; SS, 25; and TN, 10–all values expressed as parts per million.

ADI Systems Inc

1133 Regent Street, Suite 300
Fredericton, NB E3B 3Z2 Canada
Phone: 506.452.7307
Toll-free: 800.561.2831 (USA/Canada)
Fax: 506.452.7308

PO Box 397
7 Pointe Sewall Road
Wolfeboro, NH 03894 USA
Phone: 603.569.0955
Fax: 603.569.0957

www.adisystemsinc.com systems@adi.ca