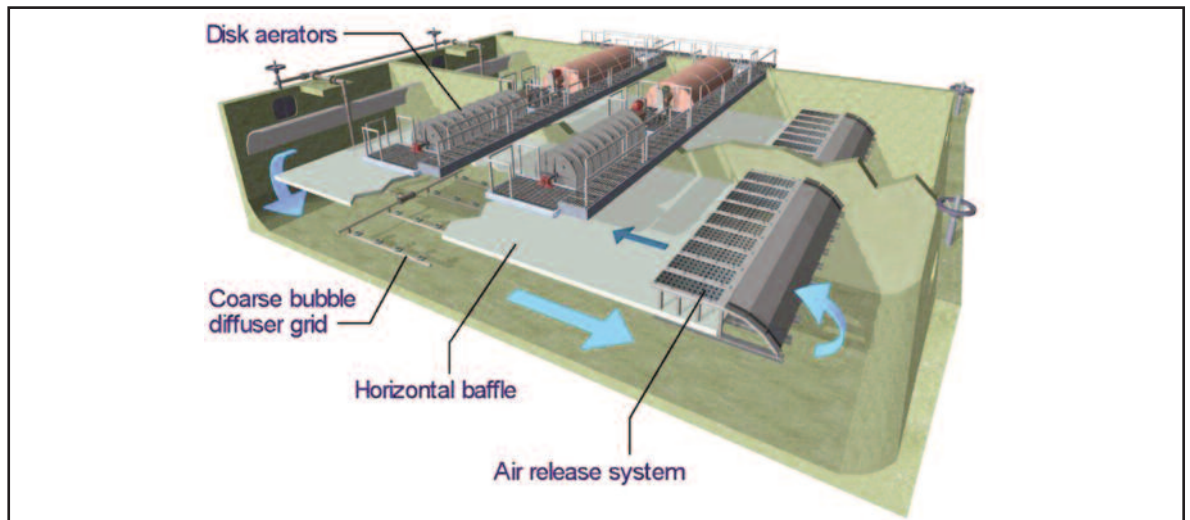


VertiCel® BNR Upgrade Provides Payback in 3 to 5 Years

The VertiCel® Process reduces energy requirements by accounting for the effects of surfactants in wastewater on oxygen transfer efficiency of aerator devices. Fine bubble diffusers are a very efficient oxygen transfer device in clean water, but surfactants reduce the efficiency of fine bubble diffusers by forming a viscous film on the surface of air bubbles. Turbulent devices, such as disc aerators and coarse bubble diffusers, prevent surfactants from accumulating into a film, and thus are more efficient

than fine bubble diffusers when end and fine bubble diffusers at the back end, the VertiCel® Process uses less energy than either type of aerator device would by itself.

Based on a power cost of \$0.11/kWh, a VertiCel® Process upgrade can have a payback of only 3 to 5 years. The energy savings, together with the nutrient removal capability of the VertiCel® Process, make this an attractive upgrade for existing fine bubble plants.



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