EnviroMix

www.enviro-mix.com

BioMix™ Compressed Gas Mixing System

MIXING LIMITED AERATION

BioMix provides mixing of tank contents by firing **programmed, short bursts of compressed air through patented, engineered nozzles** located at the floor of the tank. The mixing parameters may be adjusted to optimize mixing and power utilization, either manually or through automated process feedback.

WHAT DOES "MIXING LIMITED" MEAN?

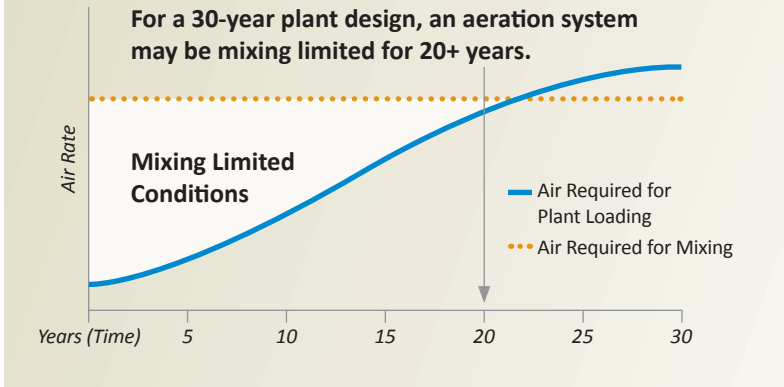
In aerobic tanks, the aeration equipment is designed to both deliver oxygen and mix the contents of the basin. Under mixing limited conditions, more air is required to mix the basin contents than is needed to satisfy the oxygen demand.

WHAT CAUSES MIXING LIMITED CONDITIONS?

- Underloading compared to design conditions
- Daily or seasonal load fluctuations
- Hydraulic limitations that prevent taking trains out of service
- Oxygen demand that is diminished by upstream aerobic zones

HOW DOES EXCESSIVE AERATION IMPACT A TREATMENT PLANT?

- Residual dissolved oxygen in RAS and mixed liquor return that inhibit biological nutrient removal (BNR)
- Poor settling
- Excess treatment chemicals in post-anoxic zones
- Wasted energy



WHY IS BIOMIX THE RIGHT SOLUTION?

Decoupling oxygen demand from mixing requirements provides the operational flexibility to reduce the airflow rate to meet the air required for plant loading. BioMix compressed gas mixing system can be interlaced with diffused aeration grids, allowing simultaneous operation at a wide range of airflow rates. This results in:

- **Promotion of anoxic and anaerobic conditions to enable BNR**
- **Conditions that promote good settling**
- **Stable dissolved oxygen profile throughout the aeration tank**
- **Significant energy savings**

www.enviro-mix.com
701 East Bay Street, Suite 502, Charleston, SC 29403
P: 843.573.7510 · F: 843.573.7531 · E: sales@enviro-mix.com

Contact sales@enviro-mix.com

TO DISCUSS HOW BIOMIX CAN OPTIMIZE YOUR MIXING LIMITED SOLUTIONS.