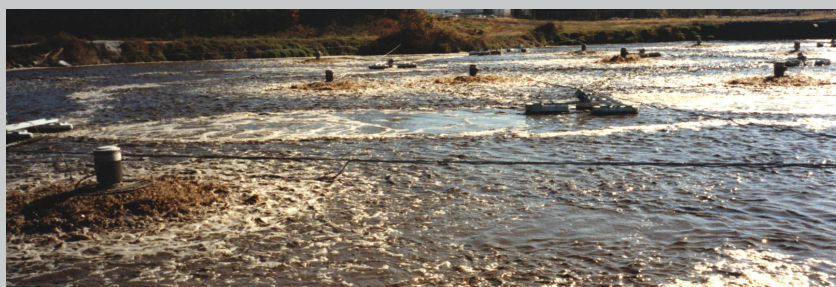


Smithfield Foods Uses FBC's O²ctopus System to Replace Costly Surface Aerators

Smithfield Foods, located in Smithfield, VA, is the country's largest producer of pork products. The company has operated a tremendous number of surface aerators (splashes) to provide the necessary dissolved oxygen to support the oxidation of soluble organics and the nitrification of ammonia.



Inefficient floating splashes

The lagoon's effluent characteristics include a flow of 1.2 MGD, average DO of .7 mg/L, average ammonia of 1 mg/L, and average BOD of 4.0 mg/L. Smithfield uses the nitrification figures as a precise indicator of the general health of the entire treatment system and whether the lagoon has sufficient DO to do its job.

In September 2000, FBC Technologies installed a 30HP O²ctopus system at

Smithfield's wastewater lagoon. The system, made of stainless steel, consisted of fifteen floating units each with eight membrane diffusers located nine feet below the water surface.

The client's goal is to replace ALL surface splashes with O²ctopus systems.

After a year of evaluating the system's performance, Smithfield Foods determined that one 30HP O²ctopus system produced enough DO to replace five 30HP splashes! During cold temperatures, the system takes advantage of thermal heat transfer through the fine bubble diffusion system - keeping the water temperature stable and enhancing suspended nitrification. Smithfield has determined that the system pays for itself in electrical savings alone in less than one year. Additionally, there are astronomical costs associated with maintaining the surface splasher system or buying new splashes which cost about the same as a single O²ctopus system.

The employees of Smithfield Foods prefer the O²ctopus system because it does not require laying of any electrical lines in the water. All surface splashes require high voltage lines to be run through the water - a dangerous situation for those working in the lagoon.

Smithfield's goal is to replace **ALL** surface splashes with O²ctopus systems within a year.



FBC's O²ctopus system

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