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PROBLEM: The city of Monroeville, Alabama, had aeration and mixing issues, a sludge build-up, and an algae problem in their sewage lagoon. This was the result of a decrease in the wastewater influent of 90% from a recently lost (shipped overseas) garment manufacturing facility the loss of which filled the sewage lagoon 80% with an increased biosolid loading.

SOLUTION: DO₂E provided two (2) 5 horsepower floating aerators and two (1) 3 horsepower floating mixer (suspended shearing digesters/aerators).

RESULTS: Within 120 days after installation, the sludge build-up was reduced by 80% and within the first 2 weeks, the algae had been completely removed from the treated part of the lagoon – never to return. From January 2010 through September 2015, no algae have been present in this area. This was accomplished by aeration alone – no chemicals of any kind were ever added. The dissolved oxygen levels have varied from 8.5 – 12 ppm over this four-year period. I attribute both the algae removal and sludge reduction to the increase in the dissolved oxygen levels in the lagoon, destratification of the water column as a consequence of the draw from the aerators, shear forces from both the aerators and the floating mixers, and increased reactivity as solid particulates have been reduced in size and,

therefore, increased surface area, to interact with microbial enzymes present in the naturally-occurring bioflora.

