



MILLER POULTRY ELIMINATES ODOR IN WASTEWATER TREATMENT LAGOONS WITH MOLEAER NANOBUBBLES

Client Case Study: Miller Poultry

Application: Wastewater Treatment Lagoons	Location: Orland, Indiana, USA	Unit: Titan Nanobubble Solution	Results: <ul style="list-style-type: none"> • Elimination of foul odors from lagoons • Significant YoY improvement in effluent water quality parameters
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Miller Poultry, located in Orland, Indiana, has been raising all-natural chicken for over 40 years as an “egg to table” operation. The company treats its high-strength poultry processing waste in their two, approximately 16-million-gallon (60,600 m³) facultative wastewater treatment lagoons.

During poultry processing, food safety standards and rigorous Clean in Place (CIP) procedures require high concentrations of quaternary ammonium compounds (QACs or quats) used for disinfection. Quats are a subcategory of surfactants or tensides that also include all antimicrobial cleaning products, soaps, detergents and degreasing agents. These compounds, vital for maintaining hygiene, are inhibitory to biological wastewater processes because they impede solids separation, oxygen transfer, and nutrient removal. Due to surfactant inhibition in the lagoons, Miller’s natural biological treatment process had foul odors that were significantly worse in the warmer months. Miller faced complaints from neighbors and staff that they could smell odors emanating from the lagoons.

Miller’s operations manager, Charlie Brown, tried several solutions commonly used for odor issues including deodorant chemicals and bioaugmentation, however, nothing fixed the issue. Without a solution, Brown reached out to Moleaer to try nanobubble technology.

Nanobubbles selectively break down and inactivate surfactants and other inhibitory compounds, so the natural biological process in the lagoons can work more effectively. Customers who’ve installed Moleaer technology have seen improved treatment efficiency, decreased chemical and

energy demands, reduced foul odors and more.

After installing Moleaer’s solution on their lagoon in February 2023, they immediately noticed reduced odors. While immediate odor reduction was valued, Brown wanted to ensure that these foul odors also didn’t return during the warmer months when they were often the most significant.

By November 2023, Brown was convinced he had found a solution to the odor issues at Miller. In addition, nanobubble technology enabled Miller to improve effluent water quality with reductions in ammonia, biological oxygen demand (BOD), total Kjeldahl nitrogen (TKN) and Phosphorous from their treatment lagoons.

“Moleaer’s sales, service and engineering teams were all great to work with, helping us solve our long-standing odor problem. Moleaer is a great company delivering great science and even better results,” shares Brown.



Year-Over-Year Effluent Contaminant Reductions

Ammonia	BOD	TKN	Phosphorous
96%	57%	72%	17%

Moleaer technology is flexible to treat any biological treatment process and scalable for any size plant. With nanobubble technology, industrial wastewater plants can significantly improve the quality of treated water, reduce environmental impact, and streamline their overall industrial processes.



Learn more about how Moleaer’s technology removes the inhibitory effects of surfactants in wastewater systems. Download white paper: <https://www.moleaer.com/white-paper-surfactants-wastewater>

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