



RAPID RESPONSE FOR POULTRY INDUSTRY

Project Scope

On a late Friday afternoon in June, a call came in to USP Technologies (USP): a major poultry processing plant in the southeast was in danger of violating their wastewater discharge permit. They needed a solution immediately or faced fines, a temporary shutdown of operations and significant lost revenue.

The poultry plant's 3.5 million gallon aerated wastewater treatment lagoon was unable to maintain sufficient dissolved oxygen (DO) and was unable to achieve ammonia and biological oxygen demand (BOD) discharge requirements. These conditions were brought about by a combination of warm seasonal temperatures of over 90 F, (lower O₂ solubility) and elevated BOD loading to the treatment system. In addition, the oxygen-depleted lagoon was generating significant hydrogen sulfide (H₂S) odors.



Aerated Wastewater Treatment Lagoon

Solution

A turn-key hydrogen peroxide dosing program was needed to supplement the plant's aeration equipment and get the lagoon DO levels back to a target range of 2–3 mg/L. The USP engineering team reacted quickly, working over the weekend to prepare an appropriately designed storage and dosing system and shipped it overnight to the site for installation in the field. The team mobilized on Sunday to install and prepare the systems for a Monday start-up. By Monday afternoon, the hydrogen peroxide system was fully installed and dosing started at about 3:00 pm, a mere 72 hours from the initial phone call from the poultry plant.



Sampling of the lagoon by USP Applications Specialists demonstrated that within 24 hours, the hydrogen peroxide addition to the aerated lagoons resulted in measurable increases in DO and elimination of H₂S odors. With continued dosing of hydrogen peroxide, the DO levels increased incrementally over the next several days. By the

end of the week, DO levels were back in the 2-3 mg/L target range, the ammonia and BOD levels were trending downward and the plant was out of discharge violation danger.

The poultry plant continued to use hydrogen peroxide for supplemental DO throughout the summer and early fall until cooler temperatures and lower BOD loading to the lagoons allowed their aeration systems to maintain required DO levels on their own. USP removed the storage and dosing systems at the conclusion of the project.

USP's Rapid Response Services

- Emergency hydrogen peroxide treatment of lagoons or ponds to control hydrogen sulfide (H₂S) and other odors
- Temporary application of hydrogen peroxide (H₂O₂) as a source of supplemental dissolved oxygen in biological treatment systems during periods of excessive BOD/COD loading
- Hydrogen peroxide pretreatment of high strength wastewater to reduce toxicity or BOD/COD prior to biological treatment
- Shock cleaning of cooling water systems for biofouling and slime control

The USP Advantage

USP combines experienced applications and equipment field support with a large inventory of storage systems and pumping modules to respond quickly to emergency water and wastewater treatment situations. USP can mobilize chemicals and equipment quickly to address rapid response needs, often within 24 hours.

We offer hydrogen peroxide equipment options that are designed to meet all safety requirements and sized to meet specific process and dosage rates requirements.

Our Applications Engineers and Equipment & Engineering Services teams will provide timely and thorough applications assistance and technical support during the entire project.

About USP Technologies

USP Technologies is the leading supplier of peroxygen-based technologies and services for environmental applications. We have been serving the water, wastewater and remediation markets for over 20 years and have offices and field service locations throughout North America. Our consultative approach to problem solving includes application assessment, technology selection and development of a tailored treatment approach. Our full service programs successfully integrate storage and dosing equipment systems, chemical supply, inventory and logistics management, and ongoing field and technical support. This approach provides cost-effective, "hands-off" solutions to our customers. USP Technologies also can provide access to experienced application partners for a turn-key program encompassing engineering, site characterization and technology selection, program implementation, execution and report generation.

Getting Started

We look forward to supporting your treatment needs, whatever the scale of your requirements. To obtain a streamlined treatment solution tailored to your specific project, give us a call at (877) 346-4262.

USP Technologies

900 Circle 75 Parkway, Suite 1330
Atlanta, GA 30339

USP Technologies - Canada

3020 Gore Road
London, Ontario N5V 4T7

Phone: (404) 352-6070 or (877) 346-4262

Email: info@usp technologies.com

Website: www.USPTechnologies.com

