

## Rapid Dissolved Oxygen Supplementation for a High-Capacity Rendering Plant



### Results at a Glance

- ✓ Dissolved oxygen (DO) maintained at target levels, even through fluctuations in demand
- ✓ Target throughput achieved through process stabilization
- ✓ Rapid solution deployment led to immediate results, without a large capital upgrade

### The Challenge

A large protein processing facility in the southeastern US struggled to maintain target DO levels, creating a critical process bottleneck and threatening compliance. Their difficulty maintaining DO levels stemmed from:

- **High Operational Load:** Increased throughput amplified oxygen demand in the aeration system.
- **Seasonal Stress:** Elevated temperatures reduced oxygen solubility and increased biological activity.
- **Infrastructure Constraints:** Long-term upgrades were not immediately feasible to solve immediate production constraints.

As a result, the plant needed an immediate solution to address their concerns and continue to operate at desired capacity levels.

### USP Technologies' Solution

USP Technologies implemented a **rapid-response supplemental DO** system using 50% hydrogen peroxide. Within a matter of days, **USP delivered a fully engineered solution designed for reliability and safety.**

#### System Components:

- **Storage:** 7,800-gallon double-walled tank for secure chemical containment.
- **Dosing:** High-volume system (HVS) with 3 gallons/minute pumping capacity.
- **Safety:** Integrated safety shower and eyewash station.
- **Integration:** Dosing line installed into the aeration system's recirculation loop.

### Key Results

With our **turnkey program** that includes active **inventory management, dedicated service and maintenance support, and flexible dosing control**, USP Technologies helped the plant achieve:

- **Process Stability:** The system effectively maintained target DO levels through seasonal fluctuations in demand that previously limited throughput.
- **Cost-Effective Solution:** With our turnkey systems, the facility was able to avoid immediate capital-intensive upgrades while supporting long-term goals.
- **Rapid Response:** Delivered a fully functional system in a fraction of the time required for other infrastructure improvements.

**When time is of the essence, count on USP Technologies.** Contact us today to learn more about our rapid response solutions for wastewater treatment challenges.