

## Leveraging Hydrogen Peroxide for H<sub>2</sub>S and Sulfide Control within a Poultry Processing Facility



### Results at a Glance

- ✓ Reduced H<sub>2</sub>S and liquid sulfide levels downstream of anaerobic digesters
- ✓ Improved Dissolved Air Flotation (DAF) performance and optimized biological treatment
- ✓ Enhanced ammonia removal through supplemental dissolved oxygen

### The Challenge

A large poultry processing facility was experiencing **high levels of hydrogen sulfide (H<sub>2</sub>S) and liquid sulfides** downstream of its anaerobic digesters.

These conditions created:

- **Safety concerns** for operators due to H<sub>2</sub>S exposure risk
- **Excessive sulfide toxicity** impacting the biological wastewater treatment process

The facility needed a reliable solution to mitigate sulfide issues, protect worker safety, and maintain treatment performance to target levels.

### USP Technologies' Solution

USP Technologies delivered a **full-service hydrogen peroxide treatment program** designed to address process performance challenges. Our solution included:

- **7,800 gallon** hydrogen peroxide storage tank
- **Dual-pump dosing skid** for precise chemical delivery
- **Over 300 feet of injection piping** to two critical dosing points where we delivered:
  - **Post-anaerobic DAF unit:** Reduced H<sub>2</sub>S and liquid sulfide levels, improving DAF efficiency
  - **Biological wastewater treatment process:** Provided supplemental dissolved oxygen (DO) on demand to optimize performance and enhance ammonia removal

### Key Results

Our **full-service program**, including **product storage and delivery, dosing equipment, and ongoing service and support**, helped the facility achieve:

- **Improved Safety:** Controlling H<sub>2</sub>S levels to reduce exposure risk for operators
- **Optimized Treatment:** Enhanced biological process stability and ammonia removal
- **Sustained Performance:** Our program remained an integral part of the facility's wastewater treatment program for over six years, supporting operations through major plant upgrades.

At USP Technologies, we deliver **turnkey full-service solutions** to help facilities **stay compliant, protect worker safety, and maintain operational efficiency.**