

Polyblend® Dry Polymer Activation Equipment Upgrade Yields Consistent Polymer Savings for New Jersey Poultry Plant Wastewater System



Across the country, the food processing industry is regulated by both federal and local regulations regarding wastewater discharge. Generally, plants must adhere to their NPDES (National Pollution Discharge Elimination System) permit for wastewater and are assessed additional charges from the local municipal wastewater plant if the concentration of discharged waste rises above a pre-determined level. Hence, food processing companies have both an economic and regulatory hurdle as they endeavor to operate their wastewater treatment systems successfully.

B&B Poultry is a national family-owned poultry processing enterprise that has been operating in its modern Norma, NJ facility for over 75 years. Known throughout the world for quality and integrity, B&B's operating discipline extends to the operation of its wastewater treatment system. The key treatment process is a DAF (dissolved air flotation) unit operation which drives air in the form of microbubbles into the wastewater to aid in the flotation and separation of contaminants such as fats, oils, grease and other "biological oxygen demand" (BOD). While energy intensive, the DAF also operates best in conjunction with a chemical polymer which enhances the coagulation of the waste. This efficiency enhancement is crucial as the local wastewater plant (POTW) can assess B&B additional fees if the BOD concentration rises above a pre-determined level.

The cost of the polymer can be several times the overall energy cost and must therefore be carefully prepared and dosed into the system. Over the years, operators would manually weigh the dry polymer and add it to a mix tank where a mixer would "activate" the polymer over a 30-60 minute period. In 2019, the plant operations staff successfully upgraded the polymer blending process to a Polyblend® DP-110 activation and storage unit to improve the efficiency of activation (less polymer waste) and create instant availability of activated polymer (versus having to wait 30-60 minutes) for wastewater treatment. Once installed, the plant was able have activated polymer ready for wastewater treatment at all times without the previous manual weighing and mixing steps.



"Our continued investment in wastewater treatment capabilities is consistent with our stewardship of our local environment and community. The Polyblend® DP-110 really allows us to be more efficient in polymer dosing and helps ensure environmental compliance – a win-win".

Vince Marino, General Manager, B&B Poultry