



Reducing BOD, COD Levels

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Among the more perplexing and costly issues that companies that have corrugators face on a daily basis is the optimal management of starch in their wastewater. Two such challenges are the need to avoid viscosity swings and precipitate out as much calcium as possible to minimize scoring on the rollers in the case of recycling. Additionally, this environment typically implies elevated levels of Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) and often entails high sewer surcharges, which seem to be increasing by the day even as tighter general discharge standards are enacted across the country.

But one Texas firm is finding success in dramatically reducing BOD and COD levels with an innovative product introduced recently by Beckart Environmental, Inc., the supplying company said. A patented chlorine dioxide-based packaged compound marketed under the AquaDry® brand name, the product is said to have shown a unique ability to reduce BOD and COD levels.

This corrugator has used a batch treatment system with Hy-Pack® filter press manufactured by Beckart for years. The plant is equipped with 3 flexos, 2 die cutters and a wax curtain coater, and typically treats approximately 4,000-5,000 gal./day. The liquid is discharged to the Publicly Owned Treatment Works, and the solids are hauled as Class 1 non-hazardous waste.

The firm's operating theory has been to reduce the negative impact of BOD and COD in the treatment process. Specifically, two sump pumps transfer liquid to an equalization tank. Even though the EQ tank was religiously maintained, operators often had to remove large quantities of sludge before progressing to the next stage. With the subsequent treatment tank always needing to be as clean and free of sludge as possible, BOD/COD "bombs" would inevitably get through and upset the treatment scheme.



The solution has been to introduce the AquaDry powder at the sumps, allowing the chlorine dioxide to begin reducing BOD and COD prior to even reaching the EQ tank. (In other installations, it is just as appropriate to introduce the AquaDry powder directly into the EQ tank, according to Beckart Environmental).

Initial reduction levels at the corrugator are reported to be impressive. COD has been reduced from 3,000 mg/l to 415 mg/l, while BOD has gone from 800-1,200 mg/l to 73 mg/l.

In addition to a full line of clarifiers, filter presses and chemicals, Beckart Environmental recently introduced the Aqua3000, a patented single-step chlorine dioxide generator for BOD, COD and odor control for larger applications.

The unique ability of chlorine dioxide to eliminate mold, mildew and other anaerobic microorganisms results in a product that is also highly effective at reducing odors at the source, Beckart reported. For a limited time, Beckart is offering a free sample packet of AquaDry for trial use.

(Editor's Note: Beckart Environmental has been working with corrugators since 1978 to produce innovative, cost-effective wastewater treatment solutions. For more information: contact Beckart Environmental at 6900 46th St., Kenosha, WI 53144; Tel: (262) 656-7680; (Fax) (262) 656-7699; information@beckart.com; www.beckart.com)