

Lower Operating Costs using Super Phos®

FIELD REPORT

Location: Paper Mill Wastewater Treatment System

Project Summary

The existing wastewater treatment system uses 600 kg/day of diammonium phosphate (DAP) to provide the needed phosphorus concentration to maintain a healthy microbial population to treat wastewater. These microorganisms break down the organic matter being discharged from the paper processing facility. Without the correct concentration of available phosphorus, the microorganisms are unable to grow and reproduce. The facility's effluent has a COD of 200mg/L. The plant is striving to reduce costs while maintaining the wastewater treatment plant's efficiency.

Treatment Solution

The facility agreed to use SUPER PHOS® from Probiotic Solutions® replacing the DAP fertilizer. The daily dose of SUPER PHOS® was 75 kg versus 600 kg per day of DAP. This large reduction in chemicals **“reduced storage space required as well as labor costs in moving and dosing the product.”** In addition, by using SUPER PHOS®, the chemical costs were reduced by over 17%. Treatment efficiency was maintained even with the significant reduction in the dosing of phosphorous into the wastewater treatment plant. The effluent COD was maintained at 200 mg/L. Furthermore, after the addition of SUPER PHOS® a microscopic analysis of the sludge showed the microbiology to be more active and regrowth was more vigorous.

Conclusion

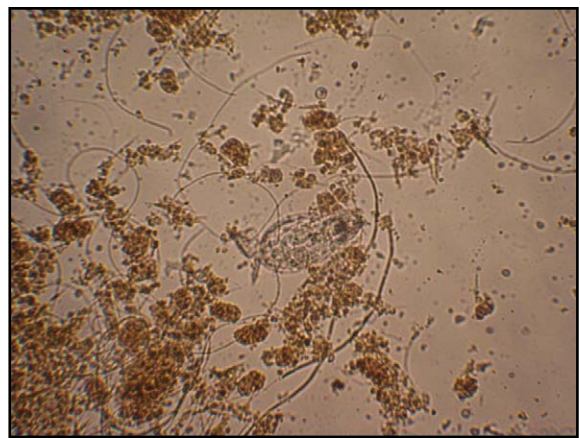
Replacing DAP with SUPER PHOS® from Probiotic Solutions® lowered chemical costs by over 17%, reduced labor hours and necessary storage facilities, improved the microbiology in the wastewater while maintaining the treatment efficiency. In addition, by reducing the quantity of phosphorus being added to the system has reduced corrosion and deposits in pipelines further reducing operation and maintenance costs.

Product Info

In response to the reactivity of phosphorous in wastewater, Probiotic Solutions® developed a phosphorous product scientifically complexed with Micro Carbon Technology® called SUPER PHOS®. Over the years this product has proven to save money and improve plant performance by maximizing phosphorous bioavailability with minimum phosphorous input. SUPER PHOS® is an essential component of energy-carrying phosphate compounds (ATP & ADP), nucleic acids, several essential coenzymes, and phospholipids. SUPER PHOS® starts out as white phosphoric acid that is pre-complexed with organic acids to ensure maximum availability to microorganisms. SUPER PHOS® has proven itself in wastewater applications where maximum performance is required and minimum effluent phosphorous concentrations are demanded.



Paper Mill Wastewater Treatment System



Microbial Microscopical Examination

Probiotic Solutions® Product Information

For many years wastewater operators have continued to use SUPER PHOS® to cut their chemical costs while maintaining efficacy of their system.

Operators Using SUPER PHOS® Report:

- 1) Reduced material costs, easier handling, and improved treatment Performance.** Typically 1/4th to 1/10th the amount of SUPER PHOS® is used compared to common grade phosphoric acid nutrients.
- 2) SUPER PHOS® is more bio-available than regular phosphorous compounds.** SUPER PHOS® is a more bioavailable phosphorous for the microorganisms thus requiring less phosphorous to be applied and lower phosphorous discharges to receiving waters because it is protected from precipitating or tying up with other ions in water
- 3) Increases in BOD removal efficiency.** SUPER PHOS® improves treatment plant removal efficiency to increase plant treatment capacity and more easily meet effluent requirements.

SUPER PHOS® enhances the stimulation of biological activity for enhanced COD/BOD removal and more complete digestion of sludge into carbon dioxide and water.



Our Probiotic Solutions® Products

are Highly Efficient and Effective Due to Our Unique Delivery System

Call Toll Free Today for Your Free Quote and System Evaluation.

1 (800) 961-1220