

## ***Carbon Source Augmentation & Nutrient Addition***

*Biological wastewater treatment requires certain criteria to perform at levels necessary to meet today's stringent effluent guidelines. Since biological treatment is a process dealing with living organisms, it is necessary to provide an environment in which these beneficial bacteria can live and perform. Factors such as alkalinity, pH, DO, nutrients, and a food source must be considered. Some systems are deficient and adjustments are required. Knowing what is required and how much to apply is critical to this process.*



*Coyne Environmental is uniquely positioned with the most comprehensive collection of treatment options available to assist the municipal and industrial water and wastewater treatment industries in meeting your specific treatment goals.*



MUNICIPAL & INDUSTRIAL WASTEWATER TREATMENT

Carbon Source Augmentation & Nutrient Addition

Carbon is the simplest form of food from which biological organisms derive life. Many systems have sufficient quantities and nothing more is required. Some do not. And, still others require a simple chain carbon source — also known as electron donors — to achieve a higher degree of treatment called denitrification, or the reduction of ammonia into nitrates. Coyne offers all the traditional products along with the newer, safer to handle products in today’s market. Coyne Environmental Services is proud to be named Environmental Operating Solution’s (EOS) Mid-Atlantic Distributor for their line of MicroC™ Premium Carbon Sources.

Table with 2 columns: PROCESS, CHEMICAL FORMULATION. Rows include Nitrification, Denitrification Step 1, and Denitrification Step 2 with corresponding chemical equations.

Nutrients are another key ingredient required for biological activity. Many systems, particularly those that are industrial in nature or are heavily influenced by industry, are often nutrient deficient. The ability to recognize the need for nutrient addition and offer the correct additive for ammonia nitrogen or phosphorus is critical to sustaining proper treatment levels. Coyne Environmental Services not only supplies your essential products, but also our own blends of nutrients to make the addition of these products easier and application more accurate.

To contact Coyne Environmental Services for additional information specific to your application, or to reach your local Chemical Application Specialist for a site visit, please call 215-785-3000.

Or visit us at: www.coyneenvironmental.com

Carbon Sources

Table with 2 columns: PROPRIETARY PRODUCTS, TRADITIONAL PRODUCTS. Lists MicroC™ Premium Carbon Sources, MicroCg™, MicroCglycerin™, MicroCm™, Acetic Acid, Ethanol, Methanol, Potassium Acetate, and Sodium Acetate.

APPLICATIONS

- Electron Donors
Denitrification
Carbon Addition

Nutrient Addition

PRODUCTS

Table with 2 columns listing various nutrient products such as Ammonia / Anhydrous, Ammonium Bicarbonate, Ammonium Carbonate, Ammonium Chloride, Ammonium Hydroxide, Ammonium Polyphosphate, Ammonium Sulfate, Diammonium Phosphate, Dipotassium Phosphate, Disodium Phosphate, Monoammonium Phosphate, Monopotassium Phosphate, Monosodium Phosphate, Phosphoric Acid, Proprietary Blends, Rapisol, Urea, and Ammonium Polyphosphate.

APPLICATIONS

- Ammonia Nitrogen Addition
Phosphorus Addition
Micronutrient Addition

Coyne Chemical Environmental Services provides practical, economical, and user-specific solutions to virtually any municipal or industrial water and wastewater treatment challenge.