

## ■ ■ ■ Recycling and Beneficial Reuse of Alcohol Wastes

Generators of hazardous and non-hazardous wastes are constantly challenged to reduce both waste management costs and waste quantities. Strong offers an alcohol recycling process that effectively addresses both challenges.

Strong's unique, approved process allows for reduction of costs, while providing a waste alcohol reuse solution. What one generator considers a waste for disposal can be used as a raw material by another manufacturer or in another process.



*Strong offers cost-effective recycling processes for waste alcohols and many other materials.*

Waste alcohol is used for beneficial reuse in place of a commodity product per 40 CFR Chapter 1, Part 261.1, (c) (5) (ii) and 40 CFR Chapter 1, Part 261.2 (e) (1) (ii).

### REUSE PROCESS

At our facility, the beneficial reuse process uses the material as a supplementary carbon source in the wastewater treatment. The process involves the reduction of Carbonaceous Biochemical Oxygen Demand and the reduction (conversion) of the Nitrogenous Biochemical Oxygen Demand. Without a sufficient carbon supply, the autotrophic and heterotrophic bacteria within the biological system cannot function properly.

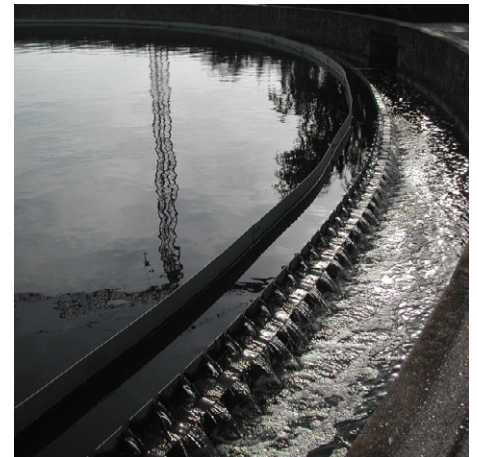
The carbon contained in the waste alcohol is used as food by the bacterial cells for cell growth. In the denitrification process, the bacteria use carbon for food and derive their oxygen from chemical compounds such as nitrates. The carbon is eventually eliminated from the treatment system as Waste Activated Sludge (WAS). Adding methanol sources to wastewater treatment systems for the

purpose of nitrification/denitrification for beneficial use is a widely accepted practice.

### BENEFITS

Some of the benefits of waste alcohol recycling include:

- Waste minimization
- Cost-effective utilization of raw materials
- Reduced disposal costs
- Demonstrates corporate responsibility to the local community
- Reduces environmental impact
- Minimizes potential liabilities regarding unforeseen future regulatory decisions



*Waste alcohol is valued for use in waste water treatment processes*

## Who We Are

Since 1993, Strong Environmental has been providing treatment, recycling and disposal services for a broad spectrum of industrial, non-hazardous, hazardous and special waste materials. We offer our clients the industry's most comprehensive network of waste disposal and treatment providers and a management team of experienced professionals.

***Strong Environmental: The Single Source for Waste Management***



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