

## CASE STUDY # 059

# RESEEDING RESTORES NITRIFICATION AT A MUNICIPAL WASTEWATER TREATMENT PLANT

### **SUBJECT:**

Reseeding with nitrifying bacteria restores nitrification following a toxic shock at a municipal wastewater treatment plant.

**PRODUCT APPLIED:**    **MICROCAT-XNC Ammonia Oxidizing Bioformula**



### **TREATMENT SYSTEM:**

Wastewater flow: 18,938 m<sup>3</sup>/day

The activated sludge wastewater treatment system consists of primary clarification, two aeration basins in series, two secondary clarifiers, followed by sand filters prior to chlorination and discharge.

### **OBJECTIVE:**

The treatment objective was to restore nitrification following a toxic shock, in order to avoid permit violation for discharge of ammonia-nitrogen.

**PROGRAM:**

Bioscience determined that **MICROCAT-XNC** was to be added to each aeration basin at a total rate of 13,5 kg per day for the first two days, and 9 kg per day for days 3 through 5.

**RESULTS:**

Normal discharge levels of ammonia nitrogen in the effluent are less than 3 mg/l. However, following a toxic shock from an unknown chemical at the wastewater treatment plant, effluent ammonia nitrogen levels soared to 16 mg/l. By the third day of the **MICROCAT-XNC** application program, ammonia nitrogen levels returned to less than 3 mg/l, and were at 0.1 mg/l by the fifth day.

Bioscience achieved the desired result by reestablishing nitrification at the wastewater treatment plant and avoiding a permit violation.

