

## CASE STUDY # 033

# REDUCTION AND CONTROL OF HYDROGEN SULPHIDE (H<sub>2</sub>S) ODOURS IN A PULP AND PAPER MILL

### SUBJECT:

Odour and corrosion control by reducing levels of hydrogen sulphide (H<sub>2</sub>S) in primary clarifiers and in a belt filter pressroom.

**PRODUCT APPLIED:** MICROCAT®-ANL Microbial Odour Control Bioformula



### TREATMENT SYSTEM:

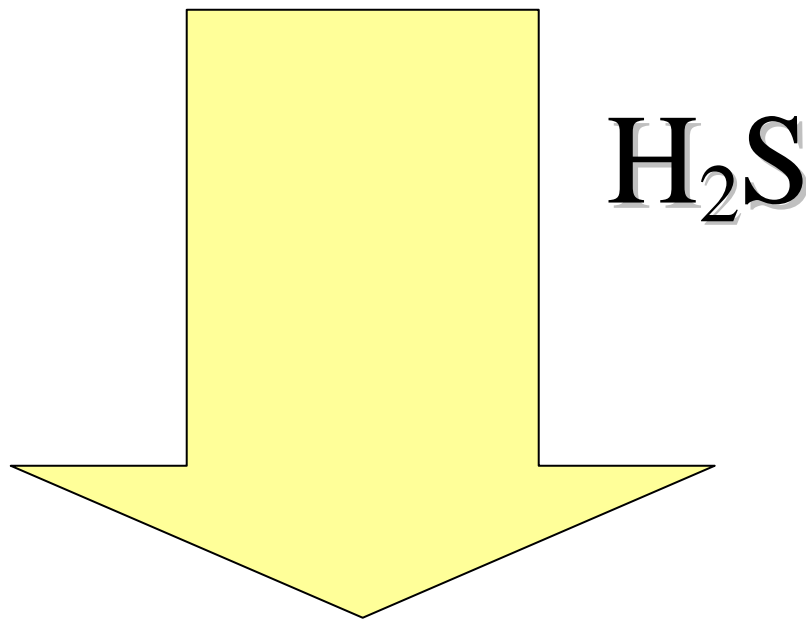
- (1) Wastewater flow: 26,515 m<sup>3</sup>/day daily flow.
- (2) 3 primary clarifiers, activated sludge and final clarification.
- (3) Primary sludge and waste activated sludge go to reaerators and then to thickeners before belt filter presses for dewatering.

**OBJECTIVE:**

The treatment objective was to reduce and control odour and corrosion resulting from H<sub>2</sub>S in the air over the primary clarifiers and in the pressroom. H<sub>2</sub>S was generated in three (3) primary clarifiers, which were situated close to a residential area. Complaints were a regular problem. In addition, H<sub>2</sub>S concentrations in the belt filter pressroom were in the range of 40 to 50 ppm with occasional spikes reaching over 100 ppm. Odours, employee safety and corrosion were a problem.

**PROGRAM:**

Addition of 7.58 litres of **MICROCAT-ANL** per 3788 m<sup>3</sup> of daily flow.

**RESULTS:**

After two years of **MICROCAT-ANL** use, the only complaints resulting from H<sub>2</sub>S odours have come when a clarifier was down for cleaning, and the product was unable to function. An unexpected added benefit to **MICROCAT-ANL** was that recovery time from shock loads to the treatment plant was reduced from 2 to 3 days down to approximately 12 hours.

H<sub>2</sub>S levels in the belt pressroom now average less than 2 ppm and are often undetectable. Safety conditions have improved and corrosion has been dramatically reduced.