

ABSTRACT

The Centre for Best Available Techniques (BAT) has been founded by the Flemish Government and is hosted by Vito, the Flemish Institute for Technological Research. The BAT centre collects, evaluates and distributes information on techniques that improve environmental quality. Moreover, Flemish authorities are advised on how to translate this information into its environmental policy. Central in this translation is the concept "BAT" (Best Available Techniques). BAT corresponds to the techniques with the best environmental performance that can be introduced at a reasonable cost.

This report discusses the BAT for slaughterhouses of cattle, pigs and poultry. BAT analysis was done with the aim to propose new wastewater discharge limits for this sector in Flanders. Other objectives were to find BAT for odour treatment and to estimate the required amounts of high quality water in slaughterhouses that take water saving measures.

BAT for waste water treatment prior to discharge into the sewers is sieving and flotation. Additional physico-chemical and/or biological treatment steps are required if waste water is to be discharged into surface water. By using these BAT slaughterhouses are able to comply with the current Flemish municipal wastewater discharge limits for COD (125 mg/l), BOD (25 mg/l) and suspended solids (60 mg/l). Vito proposes new BAT-related sectoral discharge limit values of total nitrogen (40 mg/l) and total phosphorus (3 mg/l) for the slaughterhouse sector.

Prevention measures including good housekeeping often can reduce odour problems at low cost. Controlled air discharge and the use of higher stacks may also be a solution. However, if this is not sufficient the following end-of-pipe techniques are suggested as BAT: biofiltration, bioscrubbing, chemical scrubbing and odour neutralisation. Adsorption on activated carbon may be a solution for e.g. blood tanks. Waste gas incineration may be used in large installations.

BAT for minimal use of deep well water is the use of minimal amounts of water in the production process combined with the reuse of water for less demanding purposes, including secondary cooling. Maximum levels of high quality water used in BAT installations is estimated to be 160 litre per pig, 665 litre per cattle and 13 litre per broiler.

The BAT selection is based on a technical and socio-economic analysis of the sector, plant visits, discussions with industry experts and other related studies e.g. the BREF Slaughterhouses and Animal By-products Industries (draft 1, January 2003). The formal consultation was organised by means of an advisory committee of which the composition is given in Annex 1.