GLOSSARY

MLSS: Mixed liquor suspended solids (MLSS) is the concentration of suspended solids, in an aeration tank during the activated sludge process, which occurs during the treatment of waste water. The units MLSS is primarily measured in are milligrams per litre (mg/L).

Floc: A loosely clumped mass of fine particles.

Dissolved Oxygen: Dissolved oxygen (DO) is one of the most important indicators of water quality. It is essential for the survival of fish and other aquatic organisms.

Aeration tank: Where air (or oxygen) is injected in the mixed liquor.

Settling tank: It is usually referred to as "final clarifier" or "secondary settling tank". It allows the biological flocs (the sludge blanket) to settle, thus separating the biological sludge from the clear treated water.

Sludge: Thick, soft, wet mud or a similar viscous mixture of liquid and solid components, especially the product of an industrial or refining process.

HRT: The hydraulic retention time (HRT), also known as hydraulic residence time or t (tau), is a measure of the average length of time that a compound (ex. water) remains in a storage unit.

BOD: Biochemical oxygen demand (BOD) (also called biological oxygen demand) is the amount of dissolved oxygen needed (i. e., demanded) by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period.

Endogenous respiration: A situation in which living organisms oxidize some of their own cellular mass instead of new organic matter they adsorb or absorb from their environment.

SVI: Sludge Volume Index is a valuable measure of sludge settleability characteristics and can be monitored to help prevent process problems.

Nitrification: It is the biological oxidation of ammonia or ammonium to nitrite followed by the oxidation of the nitrite to nitrate. The transformation of ammonia to nitrite is usually the rate limiting step of nitrification. Nitrification is an important step in the nitrogen cycle in soil.

Denitrification: It is a microbially facilitated process of nitrate reduction (performed by a large group of heterotrophic facultative anaerobic bacteria) that may ultimately produce molecular nitrogen (N_2) through a series of intermediate gaseous nitrogen oxide products.