

Additional Aspects of Biological Treatments

Odors

- ✓ Compounds of concern (Natural process) (species recognition, pollination of plants, sexual attraction, defense, biological decomposition).
- ✓ Fatty acids (biodegradable, eg. acetic acids)
- ✓ Amines (anaerobic decomposition of proteins and amino acids)

Odors...

- ✓ Aromatic & ring structures
- ✓ Inorganic sulfide
- ✓ Organic sulfides (R-SH, eg. mercaptans: during aerobic or anaerobic decomposition)
- ✓ Terpenes (cycloalkanes, eg. oils, eucalyptus)
- ✓ Ammonia
- ✓ Other: aldehydes, alcohols, ketones, alkenes, esters, acrylates, butyrates

Measurements

- ✓ Odor panels and dilution techniques to threshold odor concentration (TOC)
- ✓ Field test
- ✓ Population statistics

Control

- ✓ Blowers
- ✓ Extraction
- ✓ Liquid absorption (oxidants such as NaO_2Cl , H_2O_2 , KMnO_4 ; bases such as CaO , $\text{Ca}(\text{OH})_2$, NaOH ; acids such as H_2SO_4 , HCl ; reducing agents such as Na_2SO_4 ; surfactants)