

STUDY AND ANALYSIS OF A LANDFILL IN REPUBLIC OF MOLDOVA

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This paper describes a study of emissions from a landfill of class-II in Republic of Moldova, especially Volatile Organic Compounds (VOC) - pollutants very dangerous for human health. The composition of the emissions can be very diverse

and depending of the nature of deposited wastes, site operation mode, age of deposits, ambient temperature, granulometry of coverage materials, compaction capacity of wastes and the tampon capacity of the landfill. Concentrations of VOC may vary because the composition of deposited wastes are very different and also because chemical and biological processes are taking place in the alveoli. Our study was raising on dynamical samples with the help of adsorbing pipes SKC on activated carbon (AC) coupling with a calibrated pomp and statistical, using Radiello pipes on AC. The next step was the extraction of pollutants and application of analytical methods. Quantitative et qualitative analysis was performed by a coupling GC/MS and a chromatograph GC 6890/MS 5973 Agilent Technologies. The results shows important concentrations of VOC in air and a 2nd impact degree for human health. Different concentrations of the same pollutants was determined by the different location of pipes. We have observed important concentrations of benzene proximity to the emission sources and especially where the wastes were completely submerged into the filtrate. Toluene and heptanes are presented in big concentrations near the zone the most odors. Limonene is found in all the pipes and this because people are using a lot of detergents containing this product without thinking about it's impact on human health. Other compounds were also detected and so showing that this landfill can have negative consequences on the environment and the human being and urgent solutions are expected.