

MUNICIPAL WASTE DISPOSAL IN ENERGETIC PILES IN SWECO TECHNOLOGY – SEVEN YEARS OF OPERATION AND WHAT NOW?

MAREK HASSO-AGOPSOWICZ, ANDRZEJ BIAŁOWIEC, MAJA RADZIEMSKA

The Faculty of Environmental Sciences and Fisheries

University of Warmia and Mazury in Olsztyn

ul. Oczapowskiego 2, 10-719 Olsztyn, Poland

Keywords: energetic piles, granulometric fraction of waste, morphological groups of waste, organic fraction of waste, water extract, biogas potential.

Summary

The investigations of energetic piles on the landfill in Zakurzewo near Grudziądz were done. The study provided answers to the following questions: I – are the piles worth digging up, II – what kind of material may be recovered after that, and III – what kind of process dominates currently in piles? It has been found out that plastic, mineral fraction and fraction of waste with the particles at the diameter below 10 mm made up about 75–90% of the total mass of waste in piles. Therefore, in the future these groups should be selected from the whole mass. Small fractions – I fraction of waste (with the particles of the diameter below 10 mm) and II fraction (with the particles of the diameter between 10–40 mm) made up significant share (50–93%) of the total mass of waste in piles. Organic matter content in dry mass of I fraction was high ranging from 71.6–86.8% of d.m. This fraction can be used as a biological layer on the landfill, but should not be treated as a neutral waste for the sake of leaching of high pollutants concentration. For the sake of low reduction of organic matter further fermentation of waste from piles W1 – W6 with biogas recovery is advisable. In order to improve structural and odor features of waste, before sorting on the secondary materials, three weeks of air drying is advisable.