

ABSTRACT

Slaughterhouses have increasingly become a vital structure in our society as they enable large scale slaughtering of livestock. However, slaughterhouses have become notorious for polluting the environment. In Nairobi especially, slaughterhouses are infamous for polluting the Nairobi River. This has forced the National Environmental Management Authority to spring into action in order to save the beloved river. Often, the authority has ordered closure of slaughterhouses in Nairobi that contribute to environmental degradation. Waste generated from slaughterhouses contains large amounts of bacteria which if not handled efficiently may result to pollution of the environment. This study was carried out in Dagoretti Market area at Thiani Slaughterhouse and Nyongara Slaughterhouse. The 2 slaughterhouses use biological methods in treating their waste. After the waste is treated, it is discharged into the public sewer. Nyongara Slaughterhouse had a biogas installed in 2009 but became non-functional in the year 2020. It has since proven cumbersome to repair. Samples were collected at the first and last ponds of the treatment plants of both the slaughterhouses and taken to the University of Nairobi Public Health Engineering Laboratory for testing. This was done so as to determine the efficiency of the treatment plant. Parameters tested were the COD, BOD, pH and solids presents. It was found that the Nyongara Slaughterhouse and Thiani Slaughterhouse did not meet the COD standards recommended by NEMA to discharge waste into the public sewer which is 1000mg/l. On the other hand, the BOD, pH, total dissolved solids and total suspended solids results all met the standards recommended by NEMA to discharge wastewater into the public sewer. It was recommended that the solution for the slaughterhouse management would be to carry out regular maintenance of the treatment facilities. This would help in ensuring the parameters especially for COD for discharging wastewater into the public sewer are met. By visual inspection, one could tell that the waste treatment plant had not undergone any maintenance as vegetation growth as well as cracks are visible on the pond walls.