

ABSTRACT

There is no leachate treatment unit in Gunung Tugel Banyumas landfill, so that leachate flows along with runoff to irrigation channel and very potential to pollute surface water. Therefore, analysis about the distribution of heavy metals on surface water and surface runoff around the Gunung Tugel landfill is needed. Determination of sampling point is using purposive sampling method based on pollution potential on each sampling point. From the results of determining the sampling point obtained 9 sample points, namely 7 points of surface water samples and 2 points of surface runoff samples. The surface water samples taken were irrigation channels around the landfill, while the surface runoff samples were taken on the water that spilled around the landfill 30 minutes after the rain. Then testing the heavy metal content was carried out using the Atomic Absorption Spectroscopy (AAS) Flame method through a process of destruction. The results of analysis of heavy metal parameters (Fe, Pb, Cd, Cr, Cu, Mn and Zn) indicate the presence of heavy metal concentrations contained in surface water and surface runoff in the Gunung Tugel Banyumas landfill. Average concentrations of heavy metals in surface water and surface runoff samples were: Fe (0.221 mg/l), Pb (0.0527 mg/l), Cd (0.00243 mg/l), Cr (-0.0003 mg/l), Cu (0.00362 mg/l), Mn (0.00230 mg/l), Zn (0.0359 mg/l). From the results of testing heavy metal content, one Fe sample at AP 6 point has exceeded the quality standard.

Keywords: *Heavy Metal, Landfill, Surface Runoff, Surface Water*