



Soil Contamination Provoked by Solid Waste Leachate

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In Brazil about 60% of the domestic urban solid waste produced, that is, about 96,302 tons a day are inadequately disposed of in waste dumps or flooded areas. In many cases the percolate drains directly to the soil or to lakes or rivers near the open dump. There are risks of pollution of natural resources. Paracambi open dump is such an example. It is an open dump about 50-70 m from the Macacos River near the town centre. It exists since the year of 1969 and receives all the waste collected in the city – domestic, commercial, waste from construction, green waste and waste from the road sweeping – and does not occur segregation and treatment for the different kind of waste.

The site of waste disposition does not have any kind of infrastructure for protection against the contamination provoked by the leachate produced in the landfill.

The waste dump is situating in an area of approximately 25.000 m², near the foot of a mountain. In front of the landfill there is the Macaco's river and some low economic level habitations, which lie along the river valley.

It was made a field monitoring of the soil close to the open dump. Soil samples were collected in dry and wet season, from five points and from different depths, until 1.5 m. Soil contamination profiles were plotted. Chemical and physical analyses on soil samples. It was measured concentration of Fe, Cu, Zn, Cd, Mn and Pb.

This paper presents the results of the monitoring, which goal was evaluated the influence, in field, of the soil contamination effects, provoked by the run-off over a discovered waste, when discharged directly on it.