

Title : STUDY OF HEAVY METALS IN LEACHATE AND GROUNDWATER
NEAR LANDFILL OF PHISANULOK MUNICIPALITY.

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The study focused on determination of concentration of heavy metals including lead, manganese, zinc, nickel, copper, chromium and cadmium in leachate and groundwater near landfill of Phitsanulok municipality, Ta Nang Ngarm, Bang-rakum, Phitsanulok. The landfill operation started in 1997 and end in 1999. Leachate and groundwater were collected and analyzed during summer (March – April 1999), rainy season (July – August 1999) and winter (November – December 1999). The results showed that the leachate contained 0.29 ppm of lead, 0.64 ppm of manganese, 0.58 ppm of zinc, 0.16 ppm of nickel, 0.07 ppm of copper, 0.05 ppm of chromium and the concentration of cadmium was below the detection limit. The groundwater contained 0.06 – 0.09 ppm of lead, 0.15 – 0.32 ppm of manganese, 0.18 – 7.16 ppm of zinc, 0.02 – 0.04 ppm of nickel, 0.01 - 0.05 ppm of copper, 0.01 ppm of chromium and the concentration of cadmium was below the detection limit. Concentrations of heavy metals except lead in groundwater are lower than the groundwater standards and the drinking water standards.