KORAGOD VICHETPITAYAPONG : A STUDY ON DISTRIBUTION OF TOXIC HEAVY METALS IN WATER AND SEDIMENT AROUND THE MAP TA PHUT INDUSTRIAL ESTATE. THESIS ADVISOR : SURAPEE ROJARAYANONT THESIS CO-ADVISOR : ASSO. PROF. PAIPAN PHORNPRAPHA, 222 PP. ISBN 974-581-131-9

The distribution of toxic heavy metals in water and sediment around the Map Ta Phut Industrial Estate was investigated from Febuary, 1989 to July, 1990. It was indicated that the average values of total Hg in water and sediment around the Rayong Bay were in the range of 0.28-13.50 ppb. and 0.16-1.65 mg/kg., respectively. While those found in the Rayong River were in the range of 0.25-7.41 ppb. and 0.25-3.94 mg/kg., respectively Organic Hg in water and sediment around the Rayong Bay were in the range of <0.05-4.04 ppb. and 0.038-0.089 mg/kg., respectively While those found in the Rayong River were in the range of <0.05-5.97 ppb. and 0.041-0.081 mg/kg., respectively.

The average values of total Pb in water and sediment around the Rayong Bay were in the range of 19.31-32.70 ppb. and 6.30-7.21 mg/kg., respectively. While those found in the Rayong River were in the range of 9.60-19.20 ppb. and 6.73-13.38 mg/kg., respectively. The average values of total Cd in water and sediment around the Rayong Bay were in the range of 1.80-6.44 ppb. and 0.38-0.67 mg/kg., respectively. But those found in the Rayong River were in the range of <0.20-8.15 ppb. and 0.16-0.30 mg/kg., respectively.

It is also revealed that Hg has more environmental impact than Pb and Cd in the studied area. Thus, the environmental management to reduce this impact was proposed.