

**Minor and trace metals in slurry slime
in mined-out ponds
in the Kinta Valley, Perak**

CHOW WENG SUM

Minerals and Geoscience Department Malaysia
20th Floor, Tabung Haji Building, Jalan Tun Razak
P.O.Box 11110, 50736 Kuala Lumpur

The Kinta Valley was renowned as the largest tin field in the world and up to 1989, there were 70,158 hectares of land under mining leases. Thereafter, the tin mining industry took a down-turn due to falling tin metal prices and what is left of the industry is now mined-out land with abundant abandoned ponds. Stretching from Pengkalan near Ipoh to Kampar in the south over a distance of 42 km, there is a total of 1,194 mined-out ponds. About 66.7% of these ponds have slurry slime at the pond bottoms, with thickness varying from 0.1 m to 7.0 m. Many of these abandoned ponds are used for the rearing of fish and ducks, or are cultivated with lotus plants. Slime is occasionally admixed with tailing sand for agricultural purposes. As such, should the slime be contaminated with heavy metals the food chain will be affected. Slime from eight ponds in the Kinta Valley was tested for minor and trace metals. Most of the slime contained higher concentrations of uranium and other trace heavy metals such as Sn, Hg, Sb,

Bi and Cd as compared to the norm in the earth's crust or stream sediments. Amongst the eight test ponds, slime from Pond B81 contained relatively higher concentrations of minor, radioactive and trace metals. Slime from Pond B81 should not be utilised as fill material as the concentration of as is above the trigger concentration and threshold value. It should also not to be used for the planting of crops as the level of zinc is high.
