Background Hazardous environment is found in some provinces of Thailand such as at the 100-year-old historic tin mining of Ron Phibun, southern part of Thailand, where the first skin cancer case was reported in 1987. Since then there have been many implementations from the government, which includes the health surveillance.

Objectives To survey the general health and toxic substance exposure of workers in high risk area.

Methods A cross-sectional survey was conducted during 2011–2012 among workers. Data was collected through periodic examination, blood and urine tests for inorganic arsenic substance. A total of 54 people participated in the study (47 males, seven females).

Results The report of overweight was 51.85%. The second problem was hypertension (24%). There were 11 of 13 (84.6%) employees who were diagnosed with hypertension and overweight. The screening chest x-ray was done and there were 11.1% with abnormal results for example, fibrosis, lung infiltration in upper lobes, nodular-like density. There were 11.1% who had high level of Arsenic and all of them did not have any knowledge about route of exposure and use PPE less than 50% of work hours.

Significance Education for prevention of health hazards must be provided urgently for the workers who work with toxic substances in Thailand. The periodic examination is important to compare with environmental data after the walkthrough survey. The long term study is necessary for the toxic substance induced cancer.