

Nopporn Wongwiwat 2009: The Efficiency of Rock Check Dam on Heavy Metal Removals in Huai Yot Sub – District Community Wastewater, Trang Province. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Professor Wit Tarnchalanukit, Ph.D. 163 pages.

The study of rock check dam on heavy metal removals from wastewater in Huai Yot sub – district community wastewater receiving canals was to see the efficiency of rock check dam on removals of heavy metals in 3 difference sources of wastewater. Water samples were collected from 3 a serial canals : Community healthy center, Municipal office and Thai rice noodle factory. Each canal 3 units of rock check dams each in flat square shape of 2.3 meter width and 0.5 meter height were set up. The water samples were taken at the upstream and downstream of each dam at every fourth week of the month in all 3 months period.

The results showed that rock check dam had the efficiency on eliminating 3 heavy metals lead, arsenic and mercury. The most efficiency on eliminating lead was the dam number 2 in the Municipal office canal with 25.36%. The most efficiency on eliminating arsenic was the dam number 3 in the Municipal office canal with 42.06%. And The most efficiency on eliminating mercury was the dam number 1 at Thai rice noodle factory canal with 74.30%. The most efficiency on eliminating heavy metal was mercury followed by arsenic and lead, respectively. Rock check dam had the most efficiency on eliminating heavy metals from Municipal office canal than others.

From the results can be said that, rock check dams were able to eliminate three heavy metals and showed high efficiency of some dams and characteristic of wastewater. This can be apply to eliminate such 3 heavy metals at other places as well.

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