Effect of Waste Water Treatment Results Gold Mines in The Kencana Settling Pond against Sambiki Water Quality and Bora in Kencana Underground Mining at PT. Nusa Halmahera Minerals, North Halmahera, North Maluku Province

By:

Sartika
(114080039)

ABSTRACT

The area of research is done in PT Nusa Halmahera Minerals in the village Tabobo, District Malifut, North Halmahera, North Maluku. The total area of PT. Nusa Halmahera Minerals is 29,622 hectares. Geographically, it is located at 127º43' EL and 1º07' NL. PT Nusa Halmahera Minerals is a gold mining company that has mining operations are some areas Gosowong Mine (open pit mine), Toguraci Mine (underground mine) and Kencana Mine (underground mine).

Research conducted using field surveys, river water sampling methods, laboratory analytical methods. For evaluation of the method using the quantitative method by comparing the laboratory results with the Quality Standards Regulation No. 82 Year 2001 Class 2 and Decree No. 202 LH 2004.

The results of the analysis and evaluation of data, suggesting that the activity of the mine drainage water quality and Bora Sambiki settling pond at the outlet point (RSPK Outlet), river Sambiki (CSS point I, II CSS, CSS III, SS10DS u/s and SS10DS d/s) and river Bora (SB15TD u/s and SB15TD d/s) does not cause pollution of the river water conditions. Based on the results of laboratory analysis of PT Nusa Halmahera Minerals showed that pH levels ranging from 6.4 to 8.34 elements with quality standards set 6-9, to the levels of TSS element is 5-31 mg/l TSS with the quality standards 50 mg / l based on grade 2 water allotment for the PP number 82 Year 2001 and for LH Decree No. 202 of 2004 which is 200 mg/l, and DO levels with values ranging from 4.43 to 7.89 mg/l. For the content of heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn) were analyzed in the laboratory Nusantara Water Laboratory (WLN) Manado results indicate not exceed the quality standards either under Regulation number 82 of 2001 and Decree No. LH 202 2004.

Keywords: mine water, river water quality