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IMPACT ASSESSMENT OF UNDERGROUND MINING WASTEWATER TO WATER ENVIRONMENT IN QUANG NINH

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Underground coal mine as Quang Hanh, Duong Huy, Uong Bi, Dong Trieu, Mong Duong are located in f Quang Ninh province, Vietnam. The results of untreated wastewater samples analysis (collected at the pits of different mines) were higher than the allowed standard with pH values from 1.2 to 1.5 times (depending on the moment of sampling); the TSS values were 4.5 to 8.3 times higher than the standard; the other values of metals (iron, manganese), hazardous waste in water were always higher than the standard (1.28 ÷ 2.55 times, 1.57 ÷ 6.6 times and 1.63 times respectively). The COD result, especially during the summer, was 1.03 ÷ 1.83 times over the standard. Underground wastewater from those mines impacted surface water quality very strongly, resulted in a redution of water resource and serious water-pollution problems in Quang Ninh. In this paper, we also proposed a number of monitoring measures for mine wastewater management.

Keywords: impact, mine wastewater, underground coal mine.