

## ABSTRACT

PT. Debbia Logistic is a coal mining services company, that working in the Mining Bussiness Permit area owned by PT. Bandung Batubara Pratama (BBP). Administratively, PT. Debbia Logistic is located in Tangkum, Raren batuah, East Barito Regency, Province of Central Kalimantan.

For mining activities, PT Debbia Logistic uses the open pit system, consists of overburden stripping, include coal loading and transportation. The heavy equipment which works on mining operations uses diesel fuel. The usage of these fuels provide a considerably influence on the cost of mining. The cost to purchase the diesel fuels spent nearly 25% of the entire cost of the mining operations. Therefore the fuel shall be used as efficient as possible, so that the company incurred costs can be saved. Based on observation in the actual conditions at the field, the fuel consumption level of the dump trucks is still quite high. To find out what causes high fuel consumption, this research focused on fuel usage in mining operations.

Dump trucks as one of equipment that works on mining activities, have a considerable number of units, so it is possible to have a major influence on overall fuel consumption. The research was conducted during March of 2011, by taking several samples of dump trucks Nissan CWB 45A LDN1 that working on a fleet, The level of fuel consumption will be analyzed while it work on three transport pathways which have different characteristics.

The research shows that theoretically production target of 230 BCM / fleet hours actually can be achieved by adjusting the number of units on each fleet. Fuel consumption of transport equipments exceeds the targeted ratio of fuel that is equal to 0.50 liters /BCM.

The amount of fuel usage is affected more by the condition of the haul roads whose slope incline is too high. From the observations known that there still haul road which has grade 13%. The ideal grade of haul road is 10% below. This problem can be avoided by making a good mine planning, establishing the ideal slope of the road, maintaining haul roads and monitoring the behaviour of operators to be more disciplined in the dumptruck operations. In turn, expected that the fuel consumption can be optimized.