

## ABSTRACT

### ANALYSIS OF FACTORS THAT CORRELATE WITH THE VALUE OF WORKER'S VITAL LUNG CAPACITY IN BUKIT ASAM (PERSERO) TBK UNIT TARAHAH LAMPUNG

By

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**Background:** There are several potential hazards Health and Safety, which raises the risk of long impact on health. There are several kind of industrial activities that can lead to environmental air pollution, such as mining processes like limestone, coal, and natural gas. Dust inhaled by workers can cause a decrease in vital lung capacity. Vital lung capacity value of a person is not only influenced by the concentration of dust exposure received, it's also influenced by the characteristics contained in individual workers.

**Method:** This type of research is observational analytic using cross sectional design. The research were done at PT. Bukit Asam (Persero) Tbk Unit Tarahan Lampung from November 2015 to January 2016. 181 workers were included in the study as the subject of this research using simple random sampling technique. The independent variable in this study were age, nutritional state, work period, using PPE, smoking habits, exercise habits and exposure to dust while the vital lung capacity as the dependent variable. The data were analyzed using *Chi-square* test and logistic regression. Collecting data is using questionnaires, observations and direct measurements.

**Result:** From the 181 respondents, 107 respondents impaired vital lung capacity and 74 respondents that there is no disruption of vital lung capacity. There are corellations between age, nutritional state, work period, smoking and exercise habits

with vital lung capacity with p value was (0.000). There is no relationship between using PPE with vital lung capacity with p value (0.102). The most correlate variable is work periode.

**Conclusion:** There are correlations between age, nutritional state, work period, smoking habits, exercise habits with vital lung capacity value. There is no relationship between using PPE with vital lung capacity value. Work period is the most associated variable with vital lung capacity.

**Keywords:** Age, Nutritional state, Work period, PPE, Smoking habits, Exercise habits, Dust, Vital lung capacity