

## THE SAWDUST INHALATION PROBLEM IN A SAWMILL ENVIRONMENT

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### ABSTRACT

The sawmill literature has diverse studies on sawmills in terms of safety, health and environment. Despite these numerous studies, investigations that relate to sawmill environments, activities and the human interface are scarce. Therefore, this paper bridges the gap by modelling the possible effects of sawdust on employees working in sawmills. A scientific explanation on sawdust particle theory within the context of workplace health and safety is attempted. Two approaches to solving the sawdust inhalation problem are discussed: (1) the volume and concentration of sawdust in the sawmill environment is related to mass inhaled by workers; and (2) the presence of long-lived carbon radioactive in wood was matched to the effective dose inhaled by workers. The framework presented is supported by drawing evidence from a case study that illustrated the effects of dust on workers based on a standard set of work for sawmill workers. This study may be of interest to managers in sawdust mills, furniture industry, safety, and health, and environment workers interested in monitoring occupational health.

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