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WHY IS EDUCATION IN ENVIRONMENTAL SAFETY SO IMPORTANT?

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Abstract

Oil shale is the main natural commodity of Estonia. The knowledge of health risks during production and handling of shale fuel oil from oil shale gives the possibilities to the environmental engineers to control the use of the Kukersite oil shale. The chemical hazards in the air of the work environment in handling of shale fuel oil are investigated. The five-step flexible risk assessment model is presented, where the relationship between the exposure concentration and the potential health impairment is given. The occupational illness stages are developed using statistical data of diagnoses of occupational diseases. In the case of benzene, xylene, toluene and phenol in the air of the work environment, the main health impairments are divided into two different groups - irritating and neurotoxic effects. According to the proposed scheme, the exposure to toluene and xylene poses justified risk (risk level II), benzene and phenol unjustified risk (risk level III). Without any additional control measures applied, the risk for occupational diseases caused by these chemicals is significant.

Key words: chemical hazards, environmental protection, shale oil, work environment

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