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Exposure to Airborne Particulate Matter in Radioactive Waste Storage Facility

The radioactive waste storage facility in Radioactive Waste Management Installation is closely related to dust. Radioactive waste storage activities obtained dust which can mix with particulate matter in the air. Respirable particulates can enter the body through the respiratory system. Particulate matter can accumulate in the lungs and cause health problems. Some of the particulate matter that remain in the alveoli can be absorbed into the blood. To find out the amount of particulate matter in the air, measurements were made using a particulate counter meter. This tool can calculate the particulate matter in the air ranging in size from 0.3 μm; 0.5 μm; 1 μm; 2 μm; 5 μm; and 10 μm. Based on the Regulation of Manpower Minister Number 5 of 2018 regarding Occupational Safety and Health in the Work Environment, the limit for respirable particulate matter is 2 mg/m3. Concentration of radioactivity in particulate matter also analyzed and compared with the minimum requirement. The results of particulate matter in radioactive waste storage facility has a concentration and radioactivity below the required limitation. To increase the amount of waste stored in the future, monitoring of particulate matter needs to be carried out continuously to support safety working area.

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