Assessing personal dust exposures during maintenance, production support and non-routine work activities

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Background

There is potential for exposure to excessive airborne dust concentrations during maintenance, production support and inspection tasks at underground coal mines. This potential can be underestimated due to the limited duration and frequency of certain tasks and the false perception they are not related to production activities.

Examples of these tasks include:

- pulling structure and installing secondary support in return roadways (service retraction, hanging pipes, building cogs, standing cans)
- cleaning down structures prior to maintenance and / or inspection (transformers, DCBs, air conditioning units, tyre and rim assemblies)
- conducting statutory inspections of return roadways
- construction activities (spraying shotcrete, building seals)
- conducting maintenance activities on mining equipment

Comments

It is important to anticipate, identify, evaluate and control personal dust exposures during all parts of the mining process. It is possible that a short duration task such as cleaning up at the end of shift can provide a significant contribution to the overall shift exposure.

Recommendations:

- Ensure risk assessment management processes consider potential for airborne dust exposure and that appropriate dust mitigation controls are identified and implemented.
- Ensure personal monitoring programmes include maintenance, production support activities and non-routine work activities. Consider these tasks when establishing similar exposure groups (SEGS).
- Ensure personal monitoring is conducted over the full shift so that all parts of the work process are captured, including clean-up and other non-production activities.
- Where high exposures are recorded, review the work processes, implement controls and repeat monitoring to assess effectiveness.

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