



## **Respiratory Protective Equipment (RPE) Review**



The Standing Dust Committee recommends that mine management review the following RPE observations collected by Coal Services, from 2010-2016 statutory dust monitoring data and consider if improvements are required in their site respiratory protection program. A copy of this bulletin should be placed on the mine notice board.

### **Underground Worker Respiratory Protection Findings**

- General improvement trend in RPE use by workers exposed to elevated airborne dust levels from 2010-2016.
- Longwall workers and workers undertaking spraying or grouting continue to display a high level of RPE use. Of the 354 longwall workers identified as having elevated dust exposure levels in 2016, less than 1% of workers were identified as not wearing RPE.
- Continuous miner worker RPE use has improved, however further improvement is required with 26% of the 186 workers with elevated dust exposure in 2016 reported as not wearing RPE.
- Maintenance and Outbye worker RPE use has not improved. 'No RPE used' was reported for 59% of the 32 workers with elevated dust exposure levels in 2016.
- Site RPE requirements should be reviewed for the following tasks identified as having elevated risk for dust exposure – Cutting stone on continuous miners, cutting breakaways on continuous miners, working in return areas and handling services equipment (pipes, cables and vent tubes).

### **Surface Worker Respiratory Protection Findings**

- No improvement evident in RPE use trends by workers exposed to elevated dust levels from 2010 - 2016.
- Improvement is required in RPE use by all surface workers with 84% of the 31 workers with elevated dust exposure in 2016 reported as not wearing RPE.
- Site RPE requirements should be reviewed for the following tasks identified as having elevated risk for dust exposure - Shot Firers, Drillers, Crusher attendants, Light Vehicle operators and field maintenance workers.
- Respirable Crystalline Silica (RCS) is much more likely to be harmful to your health than general dust. Given the prevalence of RCS in the majority of overburden and waste rocks, surface operations need to be particularly vigilant in identifying all areas of potential RCS exposure. This includes areas where dust may not be visible.



### **Additional Considerations**

- Selection of RPE should be guided by known exposure levels for each site and task. Consideration should also be made for likely barriers to RPE use such as discomfort, impaired communication/vision and access.
- RPE Training should aim to improve hazard awareness to ensure workers know where and during which tasks they are likely to be exposed to elevated airborne dust, particularly the respirable fraction which is the dust you cannot see.
- RPE Training should aim to improve risk perception to ensure that workers understand the health risk resulting from overexposure to airborne dust.
- RPE programs should include regular 'Fit Testing' and consideration of clean shaven policies for high risk exposure groups.
- Regular audits of RPE use should be undertaken during identified high risk tasks.

### **Respiratory Protection Equipment (RPE) Program**

The control of risk associated with workers being exposed to hazardous dust should follow the hierarchy of control. Control efforts should focus on high-order controls (elimination, substitution, isolation and engineering) to ideally control dust at the source of generation.

Although the use of Respiratory Protective Equipment (RPE) should rightly be considered as the last line of defence, respiratory protection programs often play a critical role in a mine sites overall Health Control strategy. Targeted efforts to control dust at the source of generation in conjunction with a robust respiratory protection program should be considered by all mine sites as part of a best practise control plan.

Respiratory protection programs should be developed and reviewed in accordance with *AS/NZS 1715:2009 Selection use and maintenance of respiratory protective devices*<sup>1</sup>.

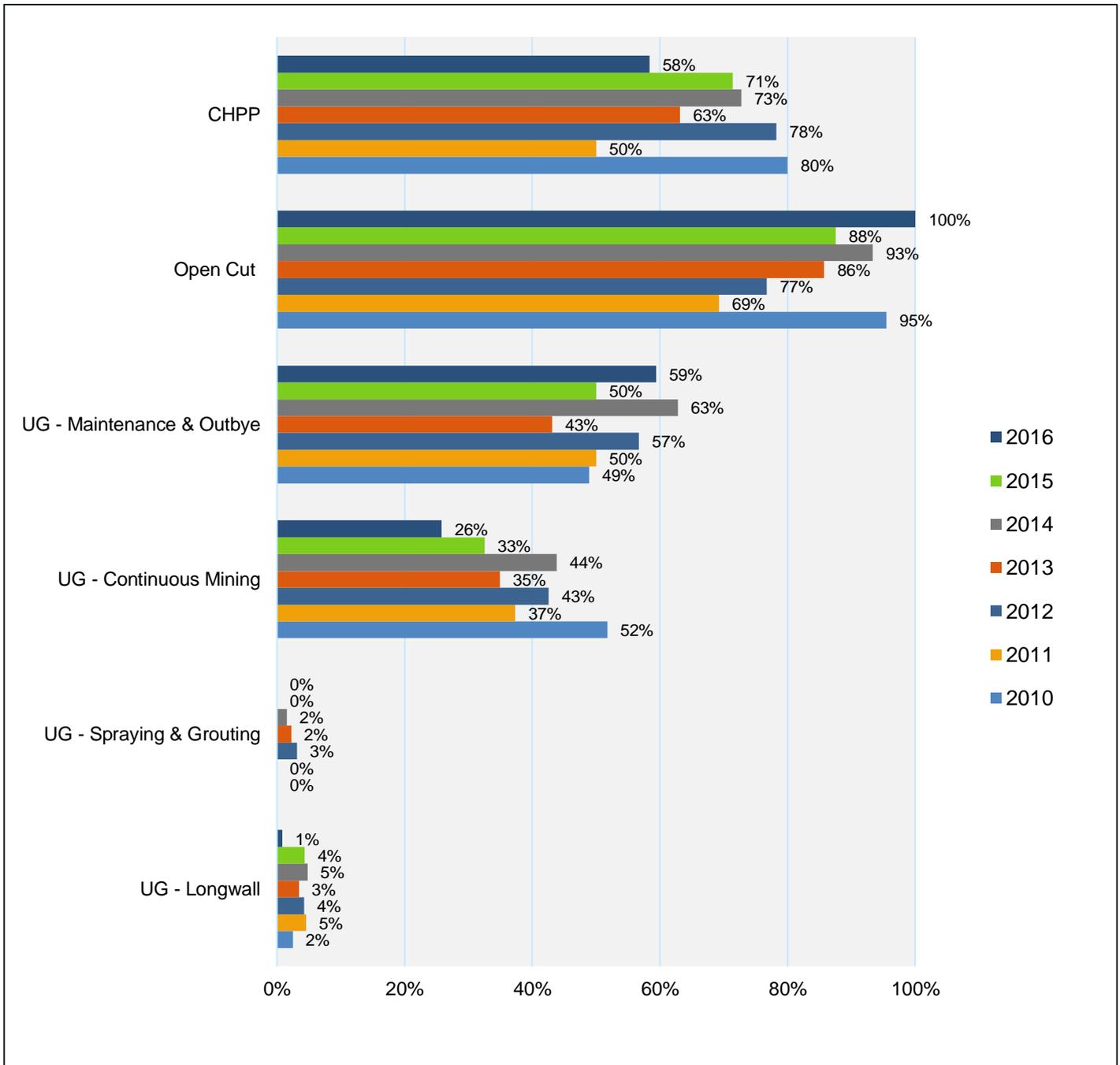
Site Respiratory Protection Programs should include procedures in relation to the following:

- Selection of RPE
- RPE training
- Fitting and wearing of RPE
- Maintenance and disposal of RPE
- Program evaluation

For the purposes of this bulletin, *Airborne Dust* includes all collected statutory dust results for respirable dust, quartz (Respirable Crystalline Silica) and inhalable dust. *Elevated dust exposure* has been classified as any airborne dust result >50% of the occupational exposure limit. *RPE use* data comes from observations and collected worker field sheets used during statutory dust monitoring. *No RPE use* is reported if RPE is not used at any stage during the dust monitoring sample period.

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<sup>1</sup> [\*AS/NZS 1715:2009 Selection use and maintenance of respiratory protective devices\*](#)



**Figure 1.** Percentage of workers reported as not wearing RPE when exposed to elevated airborne dust level (>50% of the occupational exposure limit)