

SAFETY BULLETIN

Airborne Dust - Inhalable Dust Control

BACKGROUND

The Notice under *Coal Mine Health and Safety Act 2002* issued by the Chief Inspector dated 17 December 2007 and published in the Government Gazette dated 21 December 2007 imposed a limit of 10 mg/m³ inhalable dust on all coal operations in NSW. Measurement of the inhalable dust component of airborne dust was also included into the monitoring requirements of the New South Wales coal mining industry by the same Notice.

The results to date indicate that improved dust control measures will be required in the underground coal mines of NSW.

Of concern are results relating to longwall mines in the Newcastle & Hunter District. In addition, but less frequently, there have been non-conformances recorded at longwall mines in the Southern District.

Continuous miner units have fared better but results overall tend to compare unfavourably with results achieved with respect to respirable dust monitoring.

Review of inhalable dust monitoring results Feb 2008 to Sept 2009

	Newcastle	Hunter	Western	Southern	Total
LW Samples	104	95	29	75	303
Exceedences	44	50	0	19	113
Percentage	42.3	52.6	0	25.3	37.3

	Newcastle	Hunter	Western	Southern	Total
UG Other	270	222	174	228	894
Exceedences	76	67	6	46	195
Percentage	28.1	30.2	3.4	20.2	21.8

Surface Samples (Open Cuts, CHPP)	426
Exceedences	9
Percentage	2.1

An examination of the sampling reports gives guidance on the likely causes and potential remedies associated with non-conformances.

Common reasons for non-conformance

The following observations recorded at the time of sampling give some indication as to the likely causes of high dust levels:

- Inadequate ventilation
- Inadequate water or dust control
- Poor operator positioning
- Damaged equipment
- Poor work practices

Strategies to remedy non-conformance

- Isolation or capture of dust at source via sealing of transfer points, BSL, crushers.
- Operating water sprays at appropriate locations and as near as possible to the point of breakage with sufficient water volumes, pressure and correct sizing of water jets/droplets.
- Ventilation of the correct quantities and at the right location.
- Advance ventilation ducting/brattice to mine ventilation standard.
- Regular maintenance of dust suppression equipment.
- Operator positioning, job rotation and automation.
- Control of dust levels along travelling roads,
- Respiratory protection by personal protective equipment (PPE).

RECOMMENDATIONS

Site specific safe work procedures need to be developed in consultation with all relevant persons. Work needs to be planned to identify and control risks. It is possible to hose down pipes, ventilation ducting or belt structure prior to removal and transport. If eliminating the risk is not possible then the remaining hierarchy of controls needs to be applied. This can include improved ventilation, dust suppression, maintaining equipment and closer supervision. Deputies are not immune from a failed result and are expected to lead by example and implement the control strategies for each activity. Finally, and not as a substitute for the other controls, personal protective equipment can be worn.

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Bulletin, and are informed of its content and recommendations. This Safety Bulletin should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

Signed



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INDUSTRY & INVESTMENT NSW