



**To:** Registered Managers  
Ventilation Officers  
Ventilation Technicians  
Registered Samplers

Dear Sir/ Madam

**RE: USE OF SKC CYCLONES FOR RESPIRABLE DUST SAMPLING**

**Issue**

The Department has been made aware of an issue relating to the sampling efficiency of specific SKC cyclones (Model 225-69 Cyclone Sampler with re-usable cassette for 25mm filters and Model 225-69-37 Cyclone Sampler with re-usable cassette for 37mm filters).

These devices are widely used in the Western Australian mining industry for sampling of respirable dust.

When these devices are used at the previously published flow rate of 2.2 litres per minute the respirable fraction of dust collected on the filter can be overestimated (positive bias) by up to 30%.

On the 20<sup>th</sup> August 2018 SKC Limited (SKC) issued advice that the design flow rate be amended for these devices to 3.0 litres per minute. This will result in sample collection that conforms to the BS EN481 respirable dust definition with the positive bias less than 10%.

- See [SKC advice](#)

**Recommended Action**

- Sites should amend their operating instructions in accordance with the manufacturer's instruction. See [https://www.skcltd.com/images/pdfs/007-04-001\\_Issue\\_E\\_Cyclone\\_Sampler\\_Instructions.pdf](https://www.skcltd.com/images/pdfs/007-04-001_Issue_E_Cyclone_Sampler_Instructions.pdf)
  - If a study/investigation is underway then it is acceptable to continue using the old flow rates as a change mid study could distort any data used to demonstrate changes or improvement.
- Sites should consult their occupational hygiene providers and seek advice on the effects to their sampling program.
- Sites should clarify to personnel that the changes are a result of over estimating exposure and as such they may be exposed to less risk than the previous monitoring may suggest.



- The amended flow rate only applies to the specific devices. Sites with multiple sampling devices must ensure the correct flow rate is used for each device type.
- Historical data should not be destroyed or amended.
- Further advice will be provided when additional information becomes available.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Andrew Chaplyn', written over a light blue rectangular background.

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Andrew Chaplyn  
Director Mines Safety  
Mines Safety Directorate  
28 August 2018

*Appointed State Mining Engineer*