

## ACCURACY AND CONFIDENCE PREDICTION IN VENTILATION MODELS

### Authors

Craig Stewart (Director – Chasm Consulting)

Martin Griffin (Senior Application Engineer – Chasm Consulting)

Ventilation models simulate underground pressures and flows based on data entered by the user, however the accuracy of the results can vary widely through different parts of a model depending on the structure of the ventilation system and the effect of natural ventilation pressures. These areas can be very difficult to model accurately even with correct input data and assumptions, and often cause considerable concern with ventilation professionals when simulated data does not match measure data or critical ventilation areas fail to meet expectations after design and implementation. This paper examines the causes of variability in a model and where to expect lower confidence results in a ventilation system. Methods to improve confidence through more robust ventilation design and contingency are also analysed. Methods and results are demonstrated in VentSim Design software.