

Preventing Unwanted Events

Critical Controls – Success and failure in implementing the ICMM Guidance

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ABSTRACT

This paper reports on the implementation of the critical control concept to manage material risks in mining. It draws on a benchmarking survey of good practice in the mining industry carried out by the Noetic Group, sponsored jointly by the Queensland Resources Council and the Commissioner for Resources Safety and Health in Queensland, in the context of High Reliability Organisational (HRO) theory and practice.

The concept of “critical controls” came to prominence following the publication of International Council on Mining and Metals (ICMM) guides, (Good Practice Guide and the subsequent Implementation Guide) published in 2015. This paper draws substantially on the HRO benchmarking study mentioned above following a visit to a representative sample of ten underground coal and metalliferous mines, open pit mines and quarries in Queensland and Noetic's international experience of implementing critical controls in mining and other sectors.

This paper will report on the good practices found and where significant improvements were possible and provides specific and actionable examples of both. In particular, this paper makes recommendations on how to get the best out of the critical control approach to provide a clear picture of the “health” of risk controls without getting bogged down in paperwork. The author (who played a role in developing the original guidance) also reflects on the last 10 years' experience of implementing this concept and similar approaches in other industries. The paper will also reflect on how the ICMM guidance could have looked, if we knew back in 2015 what we now know.

Finally, the paper will also illustrate how this approach can be effectively applied to enterprise risk management for material unwanted events beyond health and safety risks to which it is normally applied.