**The role of Critical Controls in Safe Tailings Management**

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# ABSTRACT

Risk management tools have become a common inclusion within the framework governing tailings management, translating technical risks into operational controls. These tools are used in the different stages of tailings management, including design, operation, governance, and closure. The identification of risks is accompanied by the identification of controls which may prevent or mitigate the risk from eventuating. In particular, Critical Controls are defined by the Global Industry Standard for Tailings Management (GISTM) as “*A control that is critical to preventing a potential undesirable event or mitigating the consequences of such an event*”. A common challenge among industry is the balance of identifying the number critical controls, developing performance standards for the controls that reflect technical and operational requirements, and resourcing to undertake the necessary risk management routines (review, verification, evaluation etc). This paper reviews the industry literature relating to critical control applications in the context of tailings management, connecting guidance material with industry applications. A reflection of the challenges associated with critical control development and management will be undertaken as part of this review. It also explores the processes relating to critical control identification and suggests their required implementation throughout each of the stages of a tailing’s facility lifecycle. Critical controls require ongoing review for the effectiveness of the control, and verification of its implementation on the ground. The paper concludes with practical recommendations for improving the integration of critical controls and tailings management, based on lessons learned from governance audits and reviews.