NSW Resource Regulator Tailings Dam Compliance Priority Assessment Plan for 41 Tailings Storage Facilities in NSW

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# ABSTRACT

The NSW Resources Regulator is responsible for the regulation of both worker health and safety and planning conditions on mining operations throughout the state of NSW. This responsibility includes Tailings Storage Facilities which often represent not just a significant, but often catastrophic consequence event to workers and the environment if they fail. The string of high-profile Tailings Dam Failures across the world over the past 12 years - including Newmont’s Cadia operation in NSW - highlights the real risk tailings dam failures pose and the need for their design, construction and management to be effectively regulated.

The NSW government recognises these risks and therefore has a specialist regulator to regulate mining across the state along with its own separate legislation. For Example, the Workplace Health and Safety (Mines and Petroleum) Regulations 2022 require mine operators to manage “Principal Hazards” which are hazards which may pose an unacceptable risk to large numbers of people if not appropriately managed such as hazards associated with Tailings Dam failure and the risks this poses to both workers and the environment.

To assess compliance with NSW legislation, the NSW Resources Regulator’s specialist group in Tailings Dams conducted an assessment program across 41 mining operations and their associated Tailings storage facilities in NSW. The Tailings Dam Compliance assessment assessed the safety management system for the Tailings Storage Facility including the dam break studies, failure modes and effect analysis risk assessments, monitoring links to trigger response plans and emergency response plans and the verification and effectiveness of the critical controls that control tailings dam embankment integrity. The assement also reviewed how the tailings dam was constructed and operated to any recognised standards such as ANCOLD and GISTM.

This paper details the results and key findings of this program and provides learnings for not just mine operators in NSW but for dam operators across Australia.