



31 December 2019

Dr Bruno Oberle
Chair of the Global Tailings Review (GTR)
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Our ref:GHD @ GTR_2019_v0

Dear Dr Oberle (and/or GTR panel)

GHD response to “Global Tailings Standard” Draft for Public Consultation (Nov 2019)

Foreword

As part of the consultation process relating to the new draft Global Tailings Standard (the ‘Standard’), GHD is pleased to respond within the available review period for industry and stakeholders. We have chosen to submit our feedback directly through this document, considering the ability to utilise this option as part of the consultation process (as opposed to use of the online portal made available).

We appreciate all comments and submissions received will be considered, although understandably there are no guarantees such feedback will be addressed or necessarily incorporated in the final drafting of the Standard. **GHD is willing to allow publication of our response on the Global Tailings Review (GTR) website.**

We understand the overarching aim of the Standard is to prevent catastrophic failures by creating a step change for the industry in the safety and security of tailings facilities. GHD of course supports the Standard objectives likely to lead to a uniformly consistent, robust and holistic approach to the safe and secure management of tailings storage facilities (irrespective of the jurisdiction or nature of companies involved / responsible), towards avoidance of the types of tragic events and consequences experienced in recent years.

GHD is one of the world’s leading professional services companies operating in the global sectors of water, energy and resources (including mining), environment, transportation, and property and buildings. Together with our clients, we create lasting community benefit. GHD provides international depth and knowledge through over 10,000 professionals across Australia and New Zealand, Asia, Europe, the Middle East and North America. GHD has specialist teams in engineering, environmental science, planning, architecture, advisory, digital solutions and communications.

In developing our response, we have drawn on a diverse cross section of our professionals, although in particular from our tailings specialists and advisory executives, to inform our Standard review process. A number of our professionals who have contributed hold leadership positions through Committee and/or Board roles with the likes of ICOLD, ANCOLD, AusIMM and MCA. In addition to reviewing the Standard documentation, several of GHD’s key specialists have also attended the Australian-based GTR consultation sessions (presentation and panel discussions).

We have structured our summary response consistent with the Standard sections (and referenced accordingly) for ease of consideration by the GTR panel and advisory group.

Standard - Introduction

- Additional clarity in the form of definition or explanation would likely be helpful for certain terms and phrases (eg., ‘zero harm’ and ‘fullest extent possible’).
- Regarding this point, for these items and a suite of others, an expanded Glossary (Annex 1 of the Standard) is likely to prove beneficial (beyond the present Annex 1 and select footnotes provided for certain terms) for clarity.
- Alternate terminology may be more appropriate in some instances (eg., rather than ‘fullest extent possible’ perhaps ‘fullest extent practicable’ or ‘as low as reasonably practicable’ (ALARP) or ‘so far as is reasonably practicable’ (SFAIRP)).

Standard – Topic I: Knowledge Base

- Footnote 4 discusses the need to capture uncertainties associated with variations due to climate change. Further definition around methodologies and technical advice on this matter in the subsequent Standard, which additionally guides climate related uncertainties and risks would add value.

Standard – Topic II: Affected Communities

- Requirement 3.3 uses the phrase ‘in good faith’, which seems odd in that similar wording is not incorporated elsewhere or throughout the Standard. Suggest ‘in good faith’ is deleted for consistency.

Standard – Topic III: Design, Construction, Operation and Monitoring of the Tailings Facility


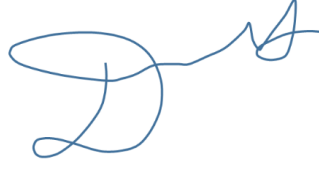

- Requirement 4.1 presumes the consequence of failure classification for all new tailings facilities is ‘Extreme’. There are potential issues associated with such an approach in terms of unclear differentiation between higher risk tailings dams and a loss of resource focus on those facilities worthy of and identified to possess a more critical relative classification. Emphasis should also be placed on the consequence assessment outcomes and presently there as a contradiction between the basis of incremental losses and flow failure in the Table 1 matrix within the Standard.

- Requirement 4.1 (c) introduces the concept of ‘material change’, with no definition, guidance or accompanying discussion (another potential Annex 1 inclusion). Certain Tier 1 miners provide specific details around materiality criteria to help clarify this matter.
- Requirement 4.1 (c) specifies timeframes at 3-yearly reviews and considering review and/ or recognition of material changes with upgrade timings, undue risks could present at the facility for extended (~ 4-5 year) periods.
- Requirement 4.3 stipulates the need to ‘reduce the risks of a potential failure to the greatest extent possible’. This should be simplified to ‘reduce the risk of failure.....’, because ‘potential’ is a function embedded within the notion of risk.
- Requirement 4.3 also uses terms such as possible and feasible, with respect to tailings facility failure and upgrade aspects respectively. This is likely to cause confusion and ALARP (as low as reasonably practicable - as noted above) would be a better concept to introduce / apply.
- Requirement 5.4 is arguably too open for interpretation within the industry (given the various risk assessment forms). Good technical support documentation and guidelines to support the Standard will be required, which sets benchmarks around the level of risk assessment rigor to apply. Certain techniques should be specified, such as quantification through an examination of failure modes, with thresholds set for quantified risk acceptability. There should also be an assurance process in place to enable all risk assessments to meet defined acceptance standards.
- Principle 6 does not adequately address tolerability and acceptability criteria. The subsections within this area should again ideally incorporate and address ALARP or SFAIRP concepts.
- Principle 7 (Requirement 7.4 in particular) acknowledges the fundamental importance of ‘critical controls’. These are crucial to preventing an event or mitigating the consequences of an event. High hazard industries have realised that the most significant aspect of the risk management process is to have robust methods for determining the controls that must not fail, and analysing them for their effectiveness in delivering the required control objective. The controls must be layered to protect against failures. The associated Requirements must adequately articulate the need for critical control management (eg., ICMM guidelines) and mandate their use.
- Principle 8 – critical controls and TARPS are crucial and although different often overlap. There is likely to be great benefit in expanding on these topics either through this Standard or accompanying future guidelines.

Standard – Annex 2: Consequence Classification

- Makes reference to Table 2 of the Standard, which is in apparent conflict with a number of existing industry guidelines, standards and codes; to the extent Table 2 contains less conservative external loading criteria in comparison.

Regards

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GHD	GHD	GHD Advisory

We would also like to acknowledge the important Standard review and inputs to this response provided by the following GHD personnel in particular:

- Jiri Herza | Technical Director
- John Phillips | Senior Technical Director
- Judd Stapleton | Team Leader – Resources, Northern Territory
- Mark Andrew | Executive Advisor, Risk, Assurance & Regulation
- Mike Erskine | Executive Advisor, Risk, Assurance & Regulation
- Olle Wennstrom | Technical Director
- Russell Mills | Executive Advisor, Risk, Assurance & Regulation