



CANADIAN DAM ASSOCIATION  
ASSOCIATION CANADIENNE DES BARRAGES  
Date: December 31, 2019

Dr. Bruno Oberle  
Chair of the Global Tailings Review

Dear Professor Oberle and Expert Panel Members,  
**Re: Comments on Draft Global Tailings Standard – November 2019**

Thank-you for the opportunity to provide comments on the draft Global Tailings Standard (GTS). We agree that failure of tailings facilities is unacceptable. A global step-change in the mining industry is required to improve performance and regain public and investor confidence. We recognize the urgency and challenge that the Global Tailings Review team has been faced with and support the establishment of the GTS.

The Canadian Dam Association (CDA) envisions a future in which all dams (including tailings dams) are safe, well-managed and benefit society. The CDA's mission is to encourage cooperation, advance technical knowledge, and build competency related to dams in Canada. The Mining Dam Committee (MDC) is a committee within the CDA that focuses on mining dam management and tailings dam safety. The MDC is composed of representatives from mining Owners, regulators and engineering consulting firms.

Many of the CDA MDC members have submitted responses through other associations (ICMM, MAC, etc.). Nonetheless, we have prepared this letter to highlight some of the key items, from the MDC perspective, which is intended to supplement the responses you receive from others. The draft GTS attempts to capture the integrated approach required for the design and management of tailings facilities throughout the life cycle stages. This is very positive. However, the current draft GTS requires some improvements and we recommend that a revised draft be circulated for further public review and comment.

We are aware that the International Commission on Large Dams (ICOLD) is also preparing a new technical guideline related to tailings dam safety. As an ICOLD member, CDA will be reviewing the ICOLD draft guideline and we expect that some of our comments and concerns will be addressed through that forum, as well. We envision that the combination of the GTS and the ICOLD technical guideline will be of value in improving tailings dam safety.

Some of the key points we wish to highlight in the draft GTS are as follows:

- *A consequence-based approach for dam classification.* Annex 2 establishes a consequence-based approach to the classification of tailings facilities while the main text has many allusions to risk-based elements. We are concerned that the basic principle of a consequence-based classification system may be confused by reference to the term “credible”, which would be appropriate for a risk-based system that takes both probability and consequence into consideration. The dam classification framework needs to be made coherent and clear in the main body of the GTS. Also, the draft GTS starts with presumption that existing and new tailings facilities are “Extreme” unless proven otherwise. We understand that this was written to make the Owner’s senior management more aware of the risks associated with a tailings dam, to adopt very stringent design criteria, and to evaluate alternative approaches for managing tailings. We are in agreement with the intent of raising risk of tailings dams to the Owner’s management, but safer tailings dams will not necessarily be achieved by adopting the most stringent flood and earthquake criteria alone (as associated with

## CANADIAN DAM ASSOCIATION ASSOCIATION CANADIENNE DES BARRAGES

Extreme consequence design criteria). The draft GTS conveys an inappropriate message to external stakeholders and runs the risk of de-emphasizing those dams that should actually be classified as extreme. It is our opinion that this approach should be re-assessed.

- *Observational Method.* Principle 8 conveys the message that tailings facilities need to be monitored. The CDA MDC fully supports this important safety requirement. However, the implementation of the Observational Method requires a comprehensive understanding of all aspects of the Observational Method. For dams with brittle element in them (e.g., liquefiable tailings or a soft clay foundation), implementation of the “Observational Method” may not be always appropriate and, in fact, reliance on the Observational Method alone to support safety assessments of the dam may be inadvertently dangerous.
- *Standard or guidance.* The GTS contains a mixture of components, some of which are deemed appropriate for a “standard” while others are more appropriate in technical “guidance”.
- *Inability to audit.* All criteria and requirements should be amenable to auditing, so that verification can be done periodically, and corrective actions can be identified and implemented.
- *Overly prescriptive.* Many of the draft GTS requirements are unnecessarily prescriptive, which can conflict with existing guidance from organizations like the CDA, or hinder the ability of the Owner to meet the intention of the GTS. Examples include requiring specific intervals for Dam Safety Reviews more frequently than standard practice and specifying actions by the EoR that fall outside the accepted definition of that role.
- *Unclear terminology.* Several terms are misused or not clearly defined, some of which are: consider, credible, empower, factor of safety, flow failure or flowable, greatest extend possible, independence, Independent Tailings Review, landform, material change, negligible likelihood of failure, Operator, oversight, Stakeholder, tailings, and TARP, to name a few. We also recommend a more comprehensive glossary be included.

We suggest that a second draft of the GTS be prepared for further public consultation prior to finalization. The MDC extends an offer to meet with the Expert Panel to develop a joint understanding of the work being conducted on various draft documents aimed at invoking a step-change in tailings dam safety.

Sincerely,



Greg Noack, P.Eng.  
Past-Chair  
Mining Dam Committee - CDA



Chad LePoudre, P.Eng.  
Chair  
Mining Dam Committee - CDA



C.A. (Andy) Small, P.Eng.  
Former-Chair  
Mining Dam Committee - CDA