

December 31, 2019

Mining Association of Canada Comments on the Draft Global Standard for Tailings Management

Dear Professor Oberle and Expert Panel Members,

Thank you for the opportunity to comment on the draft Global Standard for Tailings Management (the Standard). We appreciate the magnitude of this undertaking, and the need to improve tailings management, globally. We support the objective of the Global Tailings Review and commend the Chair and Expert Panel for its efforts to date. We are pleased to have the opportunity to provide comments and recommendations to help ensure that the Standard achieves its objective.

The Mining Association of Canada (MAC) and our members support and share the objective of preventing catastrophic failures of tailings facilities. Indeed, the objective of the tailings' management component¹ of MAC's *Towards Sustainable Mining*[®] (*TSM*[®]) program goes beyond this objective. The objective of the tailings' management component of *TSM* is to continually work to minimize harm, encompassing both the physical and chemical risks associated with tailings, including:

- Zero catastrophic failures of tailings facilities.
- No significant adverse effects on the environment or human health.

Based on a review by MAC and our members, we do have concerns that the draft Standard, in its current form, has shortcomings that would limit its effectiveness and potentially diminish the likelihood that the Standard will achieve its objective. This conclusion is further explained below and in the attached document, and is based on MAC's experience with the development, implementation, and continual

• TSM Tailings Management Protocol, which specifies performance measurement indicators and criteria.

¹ The tailings management component of *TSM* consists of:

[•] A Guide to the Management of Tailings Facilities (the Tailings Guide), first released in 1998. A revised and updated version, reflecting current leading practices, was released in 2019.

[•] Developing an Operation, Maintenance, and Surveillance Manual for Tailings and Water Management *Facilities* (the OMS Guide), first released in 2003 and updated in 2019. This is the only publicly available document of its kind.

[•] A Table of Conformance used to measure performance against the Protocol.

improvement of *TSM*. This includes not only the tailings management component of *TSM*, but also other *TSM* performance protocols related to the topics addressed in the Standard, most notably Indigenous and Community Relationships and Water Stewardship. Furthermore, MAC would be pleased to help support the further development of the Standard, based on our experience with *TSM*.

Launched in 2004, *TSM* provides a set of integrated performance measurement protocols that are intended to drive continual improvement, beyond regulatory requirements, in three key areas: environmental footprint, energy efficiency, and communities and people. By integrating these components into a single program, *TSM* recognizes that performance in each of these areas is important, but also that performance in these areas is inter-related and collectively contributes to managing key mining risks and ensuring that mining activities are sustainable. Since the introduction of *TSM*, MAC has acquired considerable knowledge of the complexities of operationalizing standards across jurisdictions and providing assurance of their effective implementation.

The tailings management component of *TSM* is the most comprehensive, transparent system for managing risks associated with tailings in the world today that includes site-level performance reporting, independent assurance and public reporting. After the Mount Polley incident in 2014, MAC conducted independent and internal reviews of the tailings' management component of *TSM* with the objective of continual improvement. As an outcome of those reviews, MAC raised performance expectations and further strengthened *TSM* requirements and guidance. Many of the topics addressed in the tailings' management component of *TSM* are also addressed in the draft Standard and in many respects the two are closely aligned.

MAC's conclusion regarding the draft Standard stems from four concerns:

- 1. Some of the proposed requirements do not effectively link together related concepts in the manner needed to support achieving the objective. For example, the draft Standard includes a proposed requirement (10.1) to establish a tailings management system, but then presents, in an unrelated manner, other requirements that would be more effective if addressed under the umbrella of a tailings management system. This weakens the overall role and importance of tailings management systems, which are essential to a holistic approach to safe tailings management. We have a similar concern with respect to the organization of items relating to OMS (Operation, Maintenance and Surveillance) manuals.
- 2. Some of the proposed requirements are too general and some are overly prescriptive. Similar to performance-based approaches to regulation, the requirements in the Standard should focus on the outcomes (intent) and instil in Owners the accountability to appropriately determine how best to achieve those outcomes. Conformance with clear requirements that are focused on intent requires sustained effort and understanding from Owners, while general or overly prescriptive requirements can lead to complacency. In the extreme, expecting conformance with requirements that are easily met or overly formulaic can lead to a false sense of security, and even lead to Owners deferring their accountability to the Standard and pointing to their conformance with it should something go wrong as a result of misunderstood intent and ineffective requirements.
 - a) One example of a requirement that is too general is Requirement 5.4: "Address all credible failure modes of the structure, its foundation, abutments, reservoir (tailings deposit and pond), reservoir rim and appurtenant structures to minimize risk. Risk assessments must be used to inform the design." Requirements for risk assessment should be consolidated in a single

requirement, and it should be clearer to Owners what the performance expectation for this requirement is, and how performance is to be measured.

- b) One example of an overly prescriptive requirement is Requirement 10.3, which prescribes that the Responsible Person must be an engineer, which is not necessary for this role, and also prescribes a specific reporting relationship and organizational structure. The desired outcome is that the Responsible Person must have a direct line of communications with the Accountable Executive Officer, but this intent is lost in the current wording of the Requirement.
- 3. The proposed Standard includes requirements related to post-incident recovery (2.6, 16.1-16.5). A focus on preparedness makes sense. However, Requirements 16.2 to 16.5 could only be applied, and performance against them could only be measured, after a failure occurs. MAC recognizes the breadth of issues related to post-incident recovery, and the importance of this topic. However, we struggle to understand how one could include in the Standard requirements that only appear to apply after the very thing this Standard is trying to prevent has occurred. Consequently, the recommendations that go beyond preparedness should be addressed in the recommendations report.
- 4. Performance against many of the proposed requirements cannot be meaningfully measured. As we have learned from TSM, having measurable performance objectives and indicators is critical to the effectiveness of any performance standard. One example of this is requirement 2.1, which combines many different elements into a single requirement, making measurement of performance very challenging. Another simple example is the Standard's use of the word "regular" in describing frequency. MAC's experience with TSM has led us to move away from words such as this, which can be subject to considerable interpretation (is regular every day, once a week, annually?), to words such as "pre-determined", which allows the auditor to check that there is an established frequency that can be measured.

These concerns are further described in the attached document, as are some other, more specific ones. However, our comments also include potential solutions to address these concerns, based on our experience developing and implementing *TSM*. For example, the way that MAC has approached the following issues may prove helpful to the Expert Panel as it considers finalization of the Standard:

- Assigning accountability for tailings management at the highest levels within the company. This was one of the recommendations from an independent review of the tailings' management component of *TSM* that was completed in 2015 and is reflected in the latest versions of the *Tailings Management Protocol* and *A Guide to the Management of Tailings Facilities*.
- Effective community engagement is the focus of a separate *TSM* protocol, the *Indigenous and Community Relationships Protocol*, which was recently revised. This protocol may provide a sound model for the development of more effective and measurable requirements in the final version of the Standard and may also help inform implementation of these requirements.

The current draft of the Global Standard is an important step. However, it needs to be improved so that it can be effectively implemented to achieve the objective of preventing catastrophic failures. Given the high profile of the Global Tailings Review and its co-convenors, the Standard will likely emerge as the most recognized global standard for tailings management. *Thus, it is imperative that the Expert Panel*

get this right. We, at MAC, have a vested interest in this, as our own standard has been globally leading for many years and would not want to see an alternative appear that is less effective than our own.

MAC is fully prepared to collaborate and contribute to the development of a final version of the Standard that is effective and aligned with *TSM*, including the potential for conformance, equivalency and even integration. It is MAC's view that this will result in a more positive outcome than a perceived competition between standards with similar objectives but differing words and requirements, particularly given the fact that *TSM* has been fully operational for 15 years and continues to be increasingly adopted by industry and countries around the globe.

MAC is willing and would welcome the opportunity to engage directly with the Chair and Expert Panel and with the co-convening partners to further discuss *TSM* and how some of the lessons learned from its development and implementation could be applied to improving the Standard and developing mechanisms for implementation.

Thank you for the opportunity provide this contribution to your efforts.

Sincerely,

And

Pierre Gratton President and CEO Mining Association of Canada

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c.c. Tom Butler, Chief Executive Officer, International Council on Mining & Metals Adam Matthews, Director of Ethics & Engagement, Church of England Pensions Board John Howchin, Secretary-General, Council on Ethics Swedish National Pension Funds Ligia Noronha, Director, Economy Division, United Nations Environment Program



Mining Association of Canada Comments on the Draft Global Standard for Tailings Management

Part I: Background - Mining Association of Canada and *Towards Sustainable Mining*

I.1 Background about the Mining Association of Canada (MAC)

Founded in 1935, MAC is the national organization representing the Canadian mining industry. MAC seeks to generate greater awareness around important areas in the sector from reclamation to partnerships with Indigenous communities.

MAC has over 40 members that are involved in mineral exploration, mining, smelting, refining and semifabrication for a wide range of commodities across Canada and around the world. Our members account for the majority of Canada's production of base and precious metals, uranium, diamonds, metallurgical coal, mined oil sands and industrial minerals. We also have more than 50 associate members that supply a range of services and materials to the mining industry, such as finance, engineering and equipment companies. Many of these associate members also have a global reach.

Working alongside our members and often in partnership with other mining-related organizations across Canada, MAC works to advance the interests of the sector. Together, we promote the mining industry nationally and internationally, work with governments on policies affecting the sector and educate the public on the value mining brings to the economy and in the daily life of Canadians.

1.2 Towards Sustainable Mining[®] (TSM[®])

Established in 2004 by MAC, <u>TSM's</u> objective is to enable mining companies to meet society's needs for minerals, metals and energy products in the most socially, economically and environmentally responsible way. *TSM* provides a set of tools to drive performance and ensure that key mining risks are managed responsibly at participating mining and metallurgical facilities.

Participation in *TSM* is mandatory for MAC's member companies for their Canadian operations and many MAC members also apply *TSM* at their operations in other countries. In 2017, *TSM* results were

reported for 67 MAC member facilities, including 10 facilities located outside of Canada (4 in Mexico and one in each of USA, Peru, Suriname, Burkina Faso, Turkey and Finland).¹

Participation involves subscribing to the <u>TSM Guiding Principles</u>, which are at the core of the initiative and represent mining companies' commitments pertaining to community engagement, environmental stewardship, and energy efficiency, with the goal of leaving lasting benefits for communities and future generations.

I.2.1 Performance Protocols

To translate these commitments into action at the facility level, *TSM* employs eight performance Protocols that focus on three core areas:

- Communities and people
 - Indigenous and Community Relationships²
 - Safety and Health Management
 - Crisis Management and Communications Planning
 - Preventing Child and Forced Labour
- Environmental stewardship
 - Tailings Management
 - Biodiversity Conservation Management
 - Water Stewardship
- Energy efficiency
 - Energy Use and Greenhouse Gas Emissions Management

These performance Protocols are designed to help companies build and evaluate their systems and processes for key aspects of mining activity. Each performance Protocol is made up of a set of indicators that focus on different components of a management system. Participating facilities are required to assess their management practices against the indicators for each of the performance Protocols.

For each indicator, facilities receive one of five scores based on the criteria they meet. The scores are described below.

¹ All reporting of application outside of Canada was by Canadian-based MAC members.

² Previously the *Aboriginal and Community Outreach Protocol*. The *Indigenous and Community Relationships Protocol* was approved in November 2019 and has not yet been implemented.

ΑΑΑ	Excellence and Leadership.
AA	Integration into management decisions and business functions.
А	Systems/processes are developed and implemented.
В	Procedures exist but are not fully consistent or documented; systems/processes planned and being developed.
c	No systems in place; activities tend to be reactive; procedures may exist but they are not integrated into policies and management systems.

I.2.2 Reporting and External Verification

TSM's primary objectives are to drive performance improvement and, through demonstration of this improvement, to build trust with communities of interest (COI). This means that communities need to understand *TSM* and trust the performance results that the mining companies report. To build this trust, the program includes a number of checks and balances to ensure that reported results present an accurate picture of each facility's management system and performance.

The layers to *TSM* reporting and external verification are:

Self-Assessment: Facilities annually self-assess their performance against the *TSM* indicators. For each indicator, they assign a letter grade that reflects their performance ranging from Level C to Level AAA. These grades are available in the *TSM* Performance by Company section of the annual *TSM Progress Report*. New members have three years to start publicly reporting, which allows them the opportunity to train employees for full implementation.

External Verification: Every three years, a trained Verification Service Provider (VSP) critically reviews a company's self-assessments to determine if there is adequate evidence to support the performance ratings the facility has reported. The VSPs are experienced auditors who are independent of the company being verified. The VSPs rigorously apply the Protocols and, where required, can change the ratings to ensure they accurately reflect the facility's management practices and performance.

CEO Letter of Assurance: In the year of external verification, the company's CEO, or most senior executive in Canada, submits a letter to MAC that confirms the external verification has been conducted in accordance with the Terms of Reference for Verification Service Providers. The letter is then posted on MAC's website (<u>www.mining.ca</u>).

COI Panel Post-Verification Review: Each year, MAC's independent COI Advisory Panel invites two companies to appear to present and discuss their *TSM* results. Through these discussions, the Panel tests to see whether and how facility systems are leading to performance improvement. The Panel explores the challenges faced by the facilities and the steps companies are taking to address them.

New Member Phase-In: New members and facilities that have recently entered into production have three years to start publicly reporting *TSM* performance. This phase-in period allows companies to conduct a gap analysis against *TSM* Protocol criteria and train relevant employees.

All results of TSM performance are reported on a facility-specific basis, in annual TSM Progress Reports.

I.2.3 Community of Interest Advisory Panel

MAC established the COI Advisory Panel in 2004 to advise on the design and implementation of *TSM* and to provide a mechanism for two-way dialogue between MAC and its communities of interest in Canada. To date, the Panel has held over 30 meetings and discussed a wide range of topics, including biodiversity conservation, tailings management, human rights, international development and, most recently, climate change, water stewardship and Aboriginal and community engagement.

The Panel's core functions include:

- Identifying current and emerging priority issues (environmental, social/cultural and economic) for the sector.
- Learning about the industry's performance on issues of interest, including how companies are engaging with local communities.
- Providing a place for dialogue and acting as a source of input and guidance for MAC and its members on *TSM* and other work areas.
- Advising and encouraging MAC and its members to improve and raise the bar for environmental, social and economic performance.
- Advising MAC on the ongoing development and implementation of *TSM* and reviewing *TSM* implementation results.

I.2.4 International Adoption of TSM

MAC is helping to build capacity within the global mining industry by sharing its expertise in sustainable mining practices. One of the most effective ways MAC and its members have been doing this is by freely sharing the *TSM* initiative with countries seeking tools to improve the performance of their mining industries. Since 2015, *TSM* has been adopted by industry associations in Finland, Botswana, Argentina, the Philippines, Spain and most recently, Brazil in September 2019. Adoption is being considered in several other countries.

While *TSM* can be applied to any mining operation regardless of jurisdiction, the priorities of each adopting country may vary and, as such, implementation of *TSM* may need to be modified to suit the local context. For example, the Finnish Mining Association modified the *TSM Aboriginal and Community Outreach Protocol* to reflect the Finnish mining sector's relationship with the Sami community. However,

each association that adopts *TSM* is required to implement the following fundamental components of the program:

- 1. Guiding Principles: Associations must commit to a set of Guiding Principles that reflect the environmental and social goals of the industry and its communities of interest.
- 2. Performance Indicators: Associations must develop performance indicators to measure success in adhering to those Guiding Principles.
- 3. Facility-Level Reporting: Associations must have measures to track progress against the performance indicators at the facility level, where the mining activity takes place.
- 4. Independent Verification: Associations must implement an appropriate framework for independent verification of performance to ensure that reported self-assessed results accurately reflect performance.
- 5. Public Disclosure of Facility-Level Reporting: A mechanism must facilitate the public reporting of facility-level performance results.
- 6. Condition of Membership: *TSM* must be a condition of membership in the implementing association.
- 7. Community of Interest Advisory Body: Associations must ensure that a Community of Interest Advisory Body, which represents challenging interests and a broad spectrum of societal perspectives, is in place.

Part II: Comments that Apply Across the Draft Standard

II.1 Links between Requirements in the Standard

Requirements in performance standards are more effective when they build upon each other and link related concepts. However, some of the proposed requirements in the draft Standard do not effectively link together related concepts in the manner needed to support achieving the objective. Most notably, we believe that requirements related to the following concepts could be presented in a better, more cohesive way to help make implementation of the Standard more effective in achieving its objective of preventing catastrophic failures:

- Tailings management systems
- Operation, maintenance, and surveillance manuals
- Planning and design phases of the life cycle

II.1.1 Tailings Management Systems

REQUIREMENT 10.1: The Board of the parent corporation shall adopt and publish a policy on or commitment to the safe management of tailings facilities, to emergency preparedness and response, and to recovery after failure that is mandatory for all its subsidiaries and joint ventures. The commitment shall require the Operator to establish a Tailings Management System (TMS), and a governance framework to assure the effective implementation and continuous improvement of the TMS.

MAC is fully supportive of the proposed requirement to establish tailings management systems. Tailings management systems have been the cornerstone of MAC guidance on tailings management since the release of the first edition of our Tailings Guide in 1998. A tailing management system integrates all the Owner's systems, practices and processes related to tailings management into one comprehensive framework, in order to more effectively manage risk and prevent failures. A tailings management system also helps to facilitate effective communications between:

- Senior management and those responsible for tailings management.
- Those with direct responsibilities for tailings management and those with indirect responsibilities for tailings management (e.g. procurement, ore processing operations).

Thus, a tailings management system is broad in scope. The section in the introduction of the draft Standard entitled "A Systems Approach" recognizes this and captures the concept well. However, this does not carry through effectively into the proposed requirements. There are a number of specific requirements that are not linked to tailings management but should be to make such systems more effective, including:

REQUIREMENT 7.5: Implement a formal change management system that triggers the evaluation, review, approval and documentation of all changes to design, construction, operation and monitoring during the tailings facility lifecycle. The change management system shall also include the requirement for a periodic Deviance Accountability Report (DAR), prepared by the EOR, that provides an assessment of the cumulative impact of the changes on the risk level of as-constructed facility. The DAR shall provide any resulting requirements for updates to the design, DBR, OMS and the monitoring program. REQUIREMENT 12.3: Establish and implement a system to manage the quality of all engineering work, the interactions between the EOR, the RTFE and the Accountable Executive, and their involvement in the tailings facility lifecycle as necessary to confirm that both the implementation of the design and the design intent are met in all cases.

These two requirements both belong within a tailings management system. Separating them creates unnecessary complexity and potential confusion.

The section describing a systems approach also reflects the plan-do-check-act process that underpins all management systems approaches. However, the definition of a tailings management system in the glossary fails to capture how all of the different items listed fit into a plan-do-check-act process. MAC recommends revising the definition of a tailings management system as follows to provide a basis for more effectively linking related requirements within the Standard.

An overarching system to support the safe operation and management of a tailings facility throughout its lifecycle to meet the Requirements of the Standard. The TMS should follow the well-established Deming cycle (Plan, Do, Check and Act). Each Owner should develop site-specific tailings management systems the are aligned with their organization. The plan-do-check-act cycle of the tailings management system encompasses a broad range of activities related to tailings management:

Plan

- Establish a corporate policy
- Assign accountability and responsibility
- Establish performance objectives and criteria
- Assess risk and develop a risk management plan
- Establish a plan for critical controls management, including pre-defined actions to be taken if performance is outside the specified range
- Establish a plan for managing change
- Establish a plan for managing conformance
- Identify and secure necessary resources (qualified personnel, equipment, budget, scheduling, training plan, control of documented information, communications plan)
- Develop an OMS manual
- Develop an emergency response plan and an emergency preparedness plan

Do

• Implement OMS activities to operationalize all of the plans

Check

- Conduct performance evaluation at various time scales to evaluate the performance of:
 - the tailings facility
 - plans developed under the tailings management system
- Incorporate results of independent review, internal and external audits, dam safety reviews, etc.

Act

- Annually review performance with senior management (Accountable Executive Officer, and summarize to Board)
- Develop and implement action plans to:
 - address deficiencies or areas of non-conformance
 - o address opportunities for continual improvement
- Revise all plans as appropriate, including updating the risk assessment and risk management plan, and the OMS manual

II.1.2 OMS Manuals

REQUIREMENT 7.4: Develop, implement and annually update an Operations, Maintenance and Surveillance (OMS) Manual that supports effective risk management as part of the TMS. The OMS Manual should follow best practices, clearly provide the context and critical controls for safe operations and be reviewed for effectiveness. The EOR and RTFE shall provide access to the OMS Manual and training to all personnel involved in the TMS.

MAC fully supports the proposed requirement to develop and implement OMS manuals. The development and implementation of site-specific OMS manuals is required in Indicator 5 of the *TSM Tailings Management Protocol* and discussed in detail in the MAC OMS Guide.

OMS is needed to operationalize a tailings management system and other components of safe tailings management on a day-to-day basis. Owners that do not effectively implement OMS activities cannot adequately understand their risks, proactively manage tailings, make informed decisions about tailings management, or have any assurance that tailings and associated risks are being effectively managed. *Without OMS, there is no control.*

However, as with tailings management systems, MAC has concerns about the lack of linkage between related requirements, and there are similar opportunities for improvement with respect to how the requirements for OMS are presented in the Standard.

Drawing on MAC's experience, there are three specific concerns with this requirement:

- 1. The Standard should not prescribe a frequency for updating an OMS manual. An OMS manual must always be up to date. Using an out-of-date OMS manual increases risk. An OMS manual must contain very specific information such as names and contact information for key personnel. As a result, the need for updates may be much more frequent than annual if there are changes to those personnel (see section 2.6 of the MAC OMS Guide). During the operating and closure phases of the life cycle, it would be appropriate to require that the OMS manual be reviewed annually (as per the annual management review above) and updated as appropriate.
- 2. The last sentence is unnecessarily prescriptive. The EOR needs to be involved in writing, reviewing, and updating an OMS manual, but may have no role in providing access. It is up to the Owner to determine who needs access, and the best mechanism for providing access (e.g., electronic vs. paper), including considerations about version control as the OMS manual is updated. Prescribing that it must be the EOR and Responsible Person is neither necessary nor helpful and could be a barrier to conformance for Owners with well established and effective mechanisms for providing

access to the OMS manual. Furthermore, the EOR may have no role in training associated with the OMS manual. Again, this is up to the Owner to decide. There are ways to confirm in an audit that the Owner carries out these responsibilities appropriately. MAC recommends that the Chair and Expert Panel review sections 2.4, 2.5 and 2.7 of the MAC OMS Guide.

3. It is not clear how this Requirement would be applied for facilities in the planning, design, or construction phases of the life cycle. Development of a conceptual OMS manual, including a conceptual surveillance plan, should begin during the planning phase. However, there is no need for a detailed or comprehensive OMS manual at this phase and no need to implement an OMS manual. Similarly, OMS activities should be planned in greater detailed during the planning phase, but again, there is no implementation of an OMS manual during this phase. During initial construction (e.g., starter dams) some surveillance instruments may be installed, and some surveillance activities may be initiated, but the full suite of planned OMS activities is not implemented. The OMS manual needs to be finalized and ready for implementation for the begin of the operations phase, when deposition of tailings into the facility commences. Application of this Requirement to these life cycle phases needs to be clarified.

As with the tailings management system, there are a number of requirements that could be under the OMS manual but are not. For example:

PRINCIPLE 8: Design, implement and operate monitoring systems, and requirements 8.1 to 8.4

This principle and requirements reflect exactly what an OMS manual is supposed to do and yet there is not even any mention of OMS in these requirements. Instead of providing separate requirements for this, the Standard needs to provide more specificity on what an OMS manual should contain, including details of a surveillance program.

Requirements 8.1 and 8.2 also illustrate the disjointed nature of some of the requirements in the draft Standard. A surveillance program must reflect the performance objectives and risk management plan. Therefore, Owners should not develop a surveillance plan first (8.1). They need to first develop the performance objectives and then develop a surveillance plan to align with those objectives. Simply reversing these two requirements would make the "story" flow better and more logically.

REQUIREMENT 5.2: Develop and implement water balance and water management plans for the tailings facility, taking into account the knowledge base, upstream and downstream hydrological basins, the overall mine site, mine planning and operations and the integrity of the tailings facility for all stages of its lifecycle.

This Requirement should also be linked to OMS, particularly the implementation of water management plans.

II.1.3 Planning and Design Phases of the Life Cycle

The draft Standard begins, in the second paragraph of the Introduction, by stating that "The Standard compels Operators to use specified measures to prevent the catastrophic failure of tailings facilities and to implement best practices in the planning, design, construction, operation, maintenance, monitoring, and closure of tailings facilities."

MAC strongly supports the acknowledgment of the planning phase as an essential step in the life cycle to help prevent catastrophic failures. Planning is a process of making some of the most important decisions about tailings management, some of which will be difficult or impossible to reverse. This includes key decisions about where a tailings facility will be located and the technologies to be used (e.g., degree to which tailings are dewatered). These decisions are directly related to the risks posed by a tailings facility and how those risks will be managed and must be taken before the design phase begins.

However, while the draft Standard has a number of proposed requirements that apply to the design phase, there are only two directly tied to planning:

REQUIREMENT 2.1: Undertake a formal, multi-criteria alternatives analysis of all feasible sites and technologies for tailings management with the goal of minimizing risk to people and the environment.

REQUIREMENT 2.2: Engage an Independent Tailings Review Board (ITRB) or an independent senior technical reviewer with no conflicts of interest to assess and review the alternatives analysis for site and technology selection.

MAC is completely supportive of the use of alternatives assessment as a decision-making tool in the planning phase and recommends the same approach in the MAC Tailings Guide. It is noted however, that a multi-criteria analysis is just one step in the process of assessing alternatives (see MAC Tailings Guide, Appendix 3):

- 1. Identify performance objectives relevant to the decision (e.g. objectives related to post-closure land use).
- 2. Identify possible (i.e. reasonable, conceivable and realistic) alternatives, avoiding *a priori* judgments about the alternatives.
- 3. Pre-screen possible alternatives to eliminate from further consideration any that would not meet the performance objectives or otherwise have characteristics that would be "show-stoppers". This step is also referred to as fatal-flaw analysis.
- 4. Assess remaining alternatives using multiple accounts analysis or a similar decision-making tool.
- 5. Conduct a sensitivity analysis to test the robustness and validity of the outcomes of the multiple accounts analysis against various biases and assumptions.
- 6. Document the results.

Also, in addition to being informed by the knowledge base, an alternatives assessment also needs to be informed by a preliminary risk analysis of the alternatives being considered.

MAC recommends that requirements for planning be integrated into Topic III, so that there is a clearer and more logical connection between planning activities and design activities, and that Topic III include two requirements specific to the planning phase:

- Conduct a preliminary risk analysis of alternatives being considered.
- Undertake an assessment of alternatives to inform the selection of a location for a tailings facility and technologies to be used for tailings management.

II.2 Striking the Right Balance with Requirements

There is a balance to be struck in developing requirements. Requirements need to be:

- Specific enough to achieve the intent, providing the Owner clarity on what the outcome of the requirement is supposed to be, and how achievement of that outcome will be measured.
- Focused on the outcome, not how an Owner is to achieve that outcome. Put another way, requirements should focus on why, what, and when and not prescribe how or who. This is consistent with performance-based approaches to regulation. Owners need to be accountable for achieving outcomes, but they also need to determine the most effective way to achieve those outcomes.

However, the draft Standard includes some requirements that are too general or vague, and some that are overly prescriptive, with too much focus on how and who.

Conformance with clear requirements that are focused on intent requires sustained effort and understanding from Owners, while general or overly prescriptive requirements can lead to complacency. In the extreme, expecting conformance with requirements that are easily met or overly formulaic can lead to a false sense of security, and even lead to Owners deferring their accountability to the Standard, pointing to their conformance should something go wrong as a result of misunderstood intent and ineffective requirements.

MAC recommends that the intent of each proposed requirement be carefully considered and clarified, taking into account the following questions:

- Why require this?
- How does it relate to the objective of the Standard?
- What is the intended outcome of the requirement?
- How will performance be measured to assess whether the outcome is being met?

II.2.1 Requirements that are not Specific Enough

The specificity needed to provide Owners clarity on what the intended outcome of a requirement does need to be provided, and there are several examples of requirements in the draft Standard that do not provide adequate specificity, as described below.

However, there are different means to achieve this specificity. The details do not necessarily need to be in the Standard.

To illustrate, MAC has achieved the necessary level of specificity in different ways for different *TSM* Protocols. In all Protocols except the *Tailings Management Protocol* (e.g., *Indigenous and Community Relationships Protocol*) the specificity is provided within the performance indicators and criteria described in the Protocol.

On the other hand, the *Tailings Management Protocol* provides few details and states the Owners must be "in conformance with" either the Tailings Guide or the OMS Guide, depending on the Indicator. For example, to achieve a Level A for Indicator 5 the performance criterion is simply: "An internal audit has been conducted and determined that an OMS manual has been developed and implemented for the tailings facility that is in conformance with the OMS Guide." However, a separate tool, the Table of Conformance provides a considerable amount of detail, defining what is required to be "in conformance".

As the Standard is further developed, MAC recommends that the Chair and Expert Panel consider both approaches to achieving the necessary level of specificity.

Examples of requirements that do not provide adequate specificity include the following:

REQUIREMENT 5.4: Address all credible failure modes of the structure, its foundation, abutments, reservoir (tailings deposit and pond), reservoir rim and appurtenant structures to minimize risk. Risk assessments must be used to inform the design.

This proposed requirement is too broad and vague and combines related but different concepts. It is not clear what an Owner needs to do to address failure modes and meet this requirement. Beyond "minimize risk", which is vague in an of itself (see section II.5) the intended outcome is not clear.

In addition, this is the only requirement in which the draft Standard refers to using risk assessment to inform design, and yet this is fundamental to planning and design of tailings facilities. This needs to be addressed more specifically in a separate point and not lost at the end of this requirement.

REQUIREMENT 3.2: Meaningfully engage project-affected people (PAP) throughout the tailings facility lifecycle regarding the matters that affect them.

MAC recommends that the Chair and Expert Panel review the *TSM Indigenous and Community Relationships Protocol* for a model of indicators and criteria that would help more effectively achieve the intent of this Requirement.

II.2.2 Requirements that are Overly Prescriptive

Requirements that are overly prescriptive:

- Increase the potential for the Standard to conflict with regulatory requirements.
- May make it difficult for Owners currently meeting or exceeding the intent of the proposed requirements to be in conformance.
- May lead to complacency through a high level of conformance with requirements that are not actually effective in achieving the intent.

Some specific examples of overly prescriptive requirements are provided below, and others are highlighted under other headings in these comments.

REQUIREMENT 6.4: The EOR shall prepare a Design Basis Report (DBR) that details the design criteria, including operating constraints, and that provides the basis for the design of all stages of the tailings facility lifecycle. The DBR must be reviewed by the ITRB or senior independent technical reviewer.

MAC supports the requirement to prepare a DBR. However, a DBR is a complex document integrating a range of information from different disciplines. It also requires input of both the EOR and the Designer

where these roles are separate. It is not appropriate to prescribe that the DBR must be prepared by the EOR. A multi-disciplinary team approach is needed.

REQUIREMENT 7.3: Prepare a detailed Construction Records Report at least annually or whenever there is any change to the tailings facility, its infrastructure or its monitoring system. The EOR shall sign this report.

MAC supports the requirement to prepare a Construction Records Report. Documentation of as-built conditions is critical as part of:

- Initial construction for new facilities.
- Planned construction during the operating phase (e.g. dam raises to increase capacity as per the design intent).
- Planning construction associated with closure plan implementation.
- Any construction related to material changes not included in the original design or closure plan.

However, construction may be intermittent, and there may be no need to prepare such a report annually if there has been no construction in the last year.

On the other hand, tailings facilities are changing constantly during the operating phase as new tailings are deposited. Thus, the requirement to prepare a Construction Records Report "whenever there is any change" could be interpreted to mean that Owners are essentially preparing such reports on a continuous basis.

The requirement should instead focus on preparing a Construction Records Report each time that one of the construction activities described in the bullets above is carried out.

REQUIREMENT 8.1: Design, implement and operate a comprehensive performance monitoring program for the tailings facility that allows full implementation of the Observational Method and covers all potential failure modes.

MAC fully supports the requirement to develop and implement a monitoring program. As noted above, this should be included in an OMS manual. However, many Owners do not use the Observational Method and reference to the Observational Method in the Standard is not appropriate.

The Observational Method can be a useful tool when is appropriately applied in situations to which it is suited. However, it is essential that anyone applying this method understand its limitations. Application without recognizing its limits could increase, not reduce, the risk of failure. For example, the Observational Method may give a false sense of security in the context of some failure modes that can develop in the context of apparent misinterpreted normality, such as:

- Brittle failure modes
- Failure modes related to piping or filters

The discussion of the role and application of the Observational Method, including its limitations and areas where it is not applicable, is best left to the ICMM guidance that is under development.

II.3 Ability of Owners to be in Conformance with the Requirements

There are two concerns related to the ability of Owners to be in conformance with the requirements that, if addressed, would increase the effectiveness of the Standard and the measurability of performance against the Standard.

- 1. The onus for conformance with the Standard must be on the Owner, with conformance achieved through the actions of the Owner, its employees, contractors, and consultants. The ability to conform must be independent of the action, or inaction, of any third parties. However, there are a number of proposed requirements for which conformance would be dependent on the actions of third parties.
- 2. A mechanism for implementing the Standard, including how to measure, report, and audit performance, has not yet been determined. However, it will be critical to the effective implementation of the Standard that performance against requirements be measurable. This has been one the learnings for MAC through the development, implementation, and continual improvement of *TSM*. And it can be challenging. However, as currently worded, conformance with some of the proposed requirements cannot be meaningfully measured. In addition, the draft Standard uses some terms that are subjective and not measurable, such as "regular".

II.3.1 Conformance Independent of Actions of Third Parties

There are several examples of proposed requirements for which conformance by the Owner would be dependent on the actions of third parties:

REQUIREMENT 3.2: Meaningfully engage project-affected people (PAP) throughout the tailings facility lifecycle regarding the matters that affect them.

MAC fully appreciates and supports the intent of this proposed requirement. The revised *TSM Indigenous and Community Relationships Protocol* (attached in Appendix 1) is specifically designed to measure performance of this important aspect of mining. This Protocol, approved in November 2019 to replace the *Aboriginal and Community Engagement Protocol*, has been revised and renamed to reflect 15 years of implementation experience since the original Protocol was first introduced, and the evolution of both societal expectations and best practices during that time.

However, meaningful engagement, as defined in the glossary, may not be achievable if communities are unwilling to engage. Thus, conformance by the Owner is dependent on the actions of third parties.

MAC recommends that the Chair and Expert Panel review the performance indicators and criteria of the *TSM Indigenous and Community Relationships Protocol*, which have been developed to be achievable independent of the actions of third parties, and to be measurable.

REQUIREMENT 15.3 and REQUIREMENT 15.4 which are further discussed below

REQUIREMENT 16.1: Meaningfully engage with public sector agencies and other organizations that would participate in medium- and long-term social and environmental post-failure response strategies.

Notwithstanding the concerns expressed below about the proposed requirements under Principle 16 for long-term recovery in the event of a catastrophic failure, meaningful engagement would be dependent upon the actions of public sector agencies and other organizations. While one would expect an Owner to attempt to do what is proposed here, requirements should be phrased in a manner that can be met by the Owner regardless of the actions of others.

II.3.2 Measurability of Performance

There are several examples of proposed requirements for which performance would be difficult or impossible to measure.

REQUIREMENT 2.1: Undertake a formal, multi-criteria alternatives analysis of all feasible sites and technologies for tailings management with the goal of minimizing risk to people and the environment. Use the knowledge base to inform this analysis and to develop facility designs, inundation studies, a monitoring program, Emergency Preparedness and Response Plans (EPRP), and closure and post-closure plans.

This requirement is very broad in scope and very difficult to measure. The first sentence is good, but the second lists of many different topics, each of which should be addressed individually to be able to measure performance. MAC recommends that, as a minimum, this requirement be broken down into separate elements.

REQUIREMENT 2.6: Taking into account actions to mitigate risks, the Operator will consider obtaining appropriate insurance to the extent commercially reasonable or providing other forms of financial assurance if appropriate to address risks relating to the construction, operation, maintenance, and/or closure of a tailings facility.

It is not clear how performance against this proposed requirement could be measured.

REQUIREMENT 3.2: Meaningfully engage project-affected people (PAP) throughout the tailings facility lifecycle regarding the matters that affect them.

Determining whether engagement has been meaningful is subjective. Even different people within individual communities potentially affected by the project may have quite different views on whether engagement has been meaningful. Building on the comment above about this requirement, the focus of the requirement needs to be on measurable actions an Owner can take to engage project-affected people.

Apart from examples of specific requirements, the draft Standard also uses terms that could have quite different meaning in different contexts, such as "regularly" or are difficult to define, such as "formal". It is better to avoid such terms as they are problematic for performance measurement.

For example, regularly could mean many things depending on the context — hourly, weekly, monthly, annually, and so on. In the *TSM* protocols, rather than requiring that certain actions be taken on a regular basis, the protocols require that actions be taken at a pre-determined frequency. This ensures that both the pre-determined frequency, and the implementation of those actions at the pre-

determined frequency, are measurable. The different levels of oversight embedded in a tailings management system are intended to ensure that the pre-determined frequency is appropriate.

The word "formal" is used in several requirements: 2.1, 7.5, 14.1. MAC recommends that a better adjective to use would be "documented" as formal in these contexts is essentially meaningless and not measurable.

II.4 Role of the State

The role of the State is addressed in the Introduction to the draft Standard. MAC agrees that, where the capacity exists, regulators have an important role to play. As such, it is important that the Standard "informs States about best practices for tailings facilities and it affords them a framework for designing rules for managing such facilities where required" as stated in the first sentence of this section.

We also agree that "Only States have a mandate to carry out enforcement. States should embrace this responsibility and use this Standard as a guide for building capacity and a regulatory framework that will ultimately fulfil a critical role in the safe management of tailings facilities."

However, in other respects, the role of the State is overstated in this section. For example, the quotation above deliberately omits "oversight" because it is not accurate to say that "only States have a mandate to carry out oversight". This is not only inaccurate; it is also completely undesirable to achieving the objective of preventing catastrophic failures. Safe tailings management requires many layers of oversight including:

- Day-to-day oversight of OMS activities
- Checks and balances to decision-making provided through the implementation of a tailings management system
- Various levels of inspection, from ongoing review and analysis of surveillance data, to daily visual inspections, routine inspections of components of tailings facilities, and dam safety inspections
- Dam safety reviews
- Governance reviews
- Oversight by the EoR, Responsible Person, and Accountable Executive Officer
- Independent Review
- Management reviews conducted as per implementation of the tailings management system
- Regulator enforcement activities

It is impossible for any regulator to provide all of these forms of oversight, and it would be completely inappropriate for a regulator to attempt to do so. Thus, stating that "only States have a mandate to carry out oversight" is simply wrong.

Similarly, the role of the State is also overstated in the first paragraph of this section: "This is a critical point because States are uniquely situated to provide independent oversight of the permitting, construction, operation, maintenance, monitoring, and closure of tailings facilities. They are likewise the most appropriate entity to set up an independent inspection and enforcement program capable of identifying problems early and making sure those problems are corrected promptly before they increase the risk of catastrophic failures."

States do not provide oversight of permitting, they are responsible for permitting, so this actually understates the role of States. In other respects, however, these sentences are not accurate. It is the role of States to set up enforcement programs. However, inspection, like oversight, occurs at many different levels and is not the exclusive domain of regulators, and nor can it be.

Similarly, States are not capable of providing all of the forms of oversight described in the first sentence, such as oversight of "construction, operation, maintenance, monitoring, and closure of tailings facilities." Again, there are many necessary layers of oversight of all of these activities. State inspectors or enforcement officers cannot be everywhere at once, and even the best resourced regulator would never have the capacity to do all of this. Nor is it their role.

The role of regulation is to provide a last, not a first, line of defence. And that is a very important role. However, it is not appropriate to expect regulators to effectively take over all aspects of oversight and inspection, which is what this section suggests. Regulators can only achieve so much. It is not realistic to look to regulators as "the most appropriate entity" to deliver programs "capable of identifying problems early and making sure those problems are corrected promptly before they increase the risk of catastrophic failures."

II.5 References to Minimizing Risk

The draft Standard makes many references to minimizing risk. However, "minimize" is a subjective and open-ended term, and it is impossible to achieve zero risk. Continued application of further risk management measures, if even possible, will eventually bring no further meaningful gains in risk reduction.

MAC recommends that instead of referring to minimizing risk, the Standard refer to the principle of "as low as reasonably practicable" or ALARP. This principle is widely applied in risk management and occupational health and safety, and states that:

"risks, lower than the tolerable risk reference line, are tolerable only if risk reduction is impracticable or if the next increment of risk reduction is not cost effective compared to the improvement gained" (US Army Corps of Engineers, revised from ICOLD)

ALARP is defined in the MAC Tailings Guide as "the point at which the cost (in time, money and effort) of further risk reduction is significantly disproportionate to the risk reduction achieved."

II.6 Consequence Classification, and the Role of Consequence Classification in the Standard

The draft Standard presents a number of requirements related to consequence classification and the role of consequence classification in the application of various requirements. They are provided in Requirements 4.1, 4.2 and 4.3:

REQUIREMENT 4.1: Presume the consequence of failure classification of all new tailings facilities as being 'Extreme' (see Annex 2, Table 1: Consequence Classification Matrix) and design, construct, operate and manage the facility accordingly. This presumption can be rebutted if the following three conditions are all met:

- a) The knowledge base demonstrates that a lower classification can be applied for the near future, including no potential for impactful flow failures; and
- b) A design of the upgrade of the facility to meet the requirements of an 'Extreme' consequence of failure classification in the future, if required, is prepared and the upgrade is demonstrated to be feasible; and
- c) The consequence of failure classification is reviewed every 3 years, or sooner if there is a material change in any of the categories in the Consequence Classification Matrix, and the tailings facility is upgraded to the new classification within 3 years. This review should proceed until the facility has been safely closed and achieved a confirmed 'landform' status or similar permanent non-credible flow failure state.

REQUIREMENT 4.2: The decision to rebut the requirement to design for 'Extreme' Consequence Classification, shall be taken by the Accountable Executive or the Board of Directors (the 'Board'), with input from an independent senior technical reviewer or the ITRB. The Accountable Executive or Board shall give written reasons for their decision.

REQUIREMENT 4.3: Existing facilities shall comply with Requirements 4.1 and 4.2. Where the required upgrade is not feasible, the Board, or senior management (as appropriate based on the Operator's organizational structure), with input from the ITRB, shall approve the implementation of measures to reduce the risks of a potential failure to the greatest extent possible.

MAC understands the underlying intent of these three requirements and others related to the role of consequence classification. However, MAC does not support the approach of presuming an extreme consequence classification for tailings facilities unless, as per Requirement 4.1, the Owner can rebut this presumption. This approach is inconsistent with the principles of risk management as applied by the global dam safety profession, and other industries that manage risks to people, the environment and third-party assets. The design basis for a tailings facility should be consistent with the level of hazard and the potential consequences of failure, and the design basis should be informed by risk assessment, including a review of the hazards and potential consequences. A presumption of any specific consequence classification is neither required nor beneficial.

Ultimately, this approach places an undue focus on consequence. However, risk assessment takes into account both the potential consequence of an event and the likelihood of that event. Risk management focuses both on reducing or eliminating consequences, and on reducing likelihood. Despite this, the approach taken in the Standard focuses on consequence and reduction of consequence. However, it may not be possible to reduce or minimize consequences, particularly for an existing facility, but it may be possible to implement additional measures to reduce likelihood.

To use an analogy – to reduce the potential consequences of flying we need to do one or more of the following:

- Stop flying altogether.
- Build smaller airplanes.
- Locate airports far from cities so that aircraft landing and taking off are over less populated areas.
- Implement systems to increase the survivability of certain types of crashes (e.g., seat belts, emergency slides).

Clearly, the first three have not happened – just the opposite. Despite safety systems to enhance survivability, the potential consequences of flying are higher than they were decades ago. However, the risks of flying are lower, through continual improvement in risk management measures aimed primarily at reducing likelihood.

Similarly, these requirements should focus both on consequence and likelihood. Yes, reduce potential consequence where achievable, but also reduce likelihood.

The approach in the draft Standard of linking design criteria to consequence classification is not aligned with the reality of corporate risk tolerance of publicly traded companies. The development of the Standard would have been a great opportunity to initiate a conversation on risk assessment that goes beyond consequence classification. There is merit in having design criteria aligned with best practice and risk assessment of a given tailings facility, including the actual hazard that facility may represent, rather than connecting design criteria specifically to consequence classification. Linking design criteria too explicitly to consequence classifications forces the designer and the Owner to use the extreme category for reasons of optics or conformance with the Standard, rather than for actually reducing risk.

In Annex 2, Table 1 the proposed metrics are Potential Population at Risk, Potential Loss of Life, Environment Health, Social & Cultural, Infrastructure & Economics, and Livelihoods. The draft Standard then links these metrics to different anticipated consequence levels, for example, an extreme event could consist in killing at least 10% of a Potential Population at Risk of 1,000 persons. Such metrics are out of touch with modern responsible mining practices and current health and safety culture. Most mining companies today have a low risk tolerance, potentially lower than that characterized in Annex 2, Table 1, and would opt for more conservative design criteria rather than, for example, rationalize the choice of design criteria based on intermediate consequence levels. Therefore, design criteria are typically based on best practice and reasonable considerations that take into account the actual hazard the site may represent and its history. It is important in a context of governance to recognize that the design is only a part of the equation to achieve safe performance with tailings management. For example, understanding the site and the materials, applying a high level of rigour during construction and operation are equally as important.

There are also more specific concerns with these requirements, as follows:

Requirement 4.1, condition (a) refers to "no potential for impactful flow failures". Impactful flow failure is not defined and is not consistent with consequence classification terminology but could be interpreted to mean zero or at most low consequence. Thus, this statement implies essentially 'the Owner can make a case for a lower consequence classification if they can demonstrate that there would be zero impact in the event of a failure." This condition is essentially unachievable for most tailings facilities and means that many facilities that should have a lower consequence classification would remain as extreme, since the Owner cannot provide evidence that there would be "no potential for impactful flow failures" – zero impact.

Requirement 4.3 poses significant challenges for existing tailings facilities, particularly some of those which are quite small or in remote locations. Such facilities would have a very low consequence classification, and yet it may be challenging for Owners to meet the conditions in Requirement 4.1 to rebut a presumption of extreme consequence. Additionally, it may be difficult or impossible to implement any measures that could reduce the consequence classification of existing tailings facilities, although it may be possible to implement additional measures to reduce the likelihood and thus the risk.

Another illustration of the problematic nature of this approach is the distinction between operating and closed facilities. In the case of operating facilities, it could be particularly challenging or impossible to mitigate for extreme potential consequences that have an extremely low likelihood of occurring. If the likelihood is estimated to be no more than 1/1,000,000 and the remaining operating life of the mine is, for example, two years, then how much energy should be focused on reducing potential consequence, versus reducing the likelihood? Given the design basis of the tailings facility, it may be impossible to reduce the potential consequence as long as the mine continues to operate.

On the other hand, during closure the conditions may change as the closure plan is implemented (e.g., reducing the water level in the tailings facility, installing covers), making it much more feasible to reduce the potential consequence as well as likelihood. Such reductions would reduce the long-term risks over decades or centuries through the closure and post-closure phases.

However, the prescriptive nature of this approach as presented in the draft Standard does not recognize such operational realities. Failure to provide flexibility for a more risk-informed approach may have very significant impact on the industry with no real benefit in terms of reducing risk.

With respect to Annex 2, Table 2, the external loading criteria for low to moderate hazard facilities should be consistent with accepted international standards for other types of hazardous facilities, or the criteria used in the International Building Code for buildings of similar hazard level. As currently proposed in the table, the criteria would be more stringent for tailings facilities than for other structures of similar potential consequence. This will allocate financial resources and effort to the greatest reduction in risk and have the largest safety benefit to people who could be affected by tailings dam failures.

Given the above, MAC recommends that these requirements be reconsidered, given the technical and practical challenges that they pose. Consequence classification is an important consideration, and where feasible, measures should be implemented to reduce the potential consequences. However, consistent with the approaches taken in other sectors, the focus should be on reducing risk.

MAC notes that ICOLD Bulletin 154, Appendix B, provides an overview of global practice in risk management as applied to dams and other industrial facilities that have high potential consequences of failure. Bulletin 154 describes three categories of risk from both an individual risk and societal risk perspective: broadly acceptable risks, tolerable risks, and unacceptable risks (Figure B1). Bulletin 154 further gives examples of annual probabilities of failure used to define the boundaries between these categories in various global jurisdictions and for various industries. The probability of failure under environmental loading is a function of the rarity of the design loading scenario, and the margin of safety in the design given that the loading scenario occurs. New tailings facilities should be designed and operated to meet the requirements for "broadly acceptable risks." If existing facilities do not already meet the requirements for "broadly acceptable risks" but fall within the "tolerable risk" category, then the owner must undertake mitigations to manage the risk to As Low as Reasonably Practicable (ALARP). Facilities that fall into the "unacceptable risk" category require immediate mitigation to reduce the hazard of the consequences, or the probability of failure. While attempting to quantify the actual probability of failure is impractical in most cases, the principles in ICOLD Bulletin 154 still provide appropriate guidance for risk management and a framework for decision making by the Owner and the Regulator.

The approach described in ICOLD Bulletin 154 may provide a better basis for the Standard than the approach proposed in the current draft. MAC recommends that the Chair and Expert Panel review the Bulletin, and seek advice from knowledgeable persons, as appropriate, to better understand the approach in the Bulletin and how it could be applied to the Standard.

II.7 Engineer of Record

MAC agrees that the Engineer of Record (EOR) has an important role to play in tailings management. This role is recognized and described in Section 4.3 of the MAC Tailings Guide and reflected in the Table of Conformance.

MAC describes the role of the EOR as follows:

The EOR verifies whether the tailings facility (or components thereof) has been:

- Designed in accordance with performance objectives and indicators, applicable guidelines, standards and legal requirements.
- Constructed, and is performing, throughout the life cycle, in accordance with the design intent, performance objectives and indicators, applicable guidelines, standards and legal requirements.

For tailings facilities that include retention structures/dams, the EOR is responsible for Dam Safety Inspections and associated reports. The EOR should also participate in the facility's risk assessments and be accessible to Independent Reviewers, and, for facilities with retention structures, dam safety reviews. The EOR provides these activities as part of the Owner's broader assurance process, as described in Section 8.

The EOR must have experience and knowledge commensurate with the risk management requirements for the facility. The EOR must have the appropriate qualifications, which includes professional certifications relevant to the jurisdiction in which the tailings facility is located (e.g., Professional Engineer registration in the appropriate province or territory in Canada).

Thus, MAC supports the intent of Principle 12 of the draft Standard to "appoint and empower" an EOR. However, we have a number of concerns with the proposed requirements under this Principle.

REQUIREMENT 12.1: Engage an engineering firm with expertise and experience in design and construction of tailings facilities of comparable complexity to provide EOR services for the tailings facility. Require that the firm nominate an individual to represent the firm as the EOR, in concurrence with the Operator, and verify that the individual has the necessary experience, skills and time to fulfil this role. Alternatively, the Operator may appoint an employee with expertise and experience in comparable facilities as the EOR. In this instance, the EOR may delegate the design to a firm ('Designer of Record') but shall remain thoroughly familiar with the design in executing their responsibilities as EOR.

This proposed requirement is cumbersome in its wording and unnecessarily complex. MAC recommends that the Standard simply require the Owner to have an EOR, and that the Standard be silent on "who" an EOR is and focus and "what" an EOR does. MAC grappled with the same issue, and reached this

conclusion, recognizing that within MAC membership there are different models for "who" an EOR is, and all can be effective.

REQUIREMENT 12.2: Empower the EOR through a written agreement that clearly describes their authority, role and responsibilities throughout the lifecycle of all facilities, including closed facilities, and during transfer of ownership of mining properties.

It is not clear why this requirement specifies a "written agreement". The focus needs to be on clearly documenting the authority, role, etc, of an EOR. There is no need to prescribe a "written agreement". The documentation could take different forms depending on "who" the EOR is, such as a job description if the EoR is an employee of the Owner, or a contract if the EOR is a third-party.

REQUIREMENT 12.5: Where it becomes necessary to change the EOR firm, develop a detailed plan for the comprehensive transfer of data, information, knowledge and experience with the construction procedures and materials.

This proposed requirement is far too reactive in nature. It would not be effective in managing the potential risks associated with a change of EOR. Developing such a plan when it becomes necessary to change the EOR is too late. What if the EOR dies? What if the EOR resigns unexpectedly? Succession planning for an EOR and other key roles must be much more proactive than this.

Through Indicator 2 of the *Tailings Management Protocol, TSM* requires succession planning. As reflected in the Table of Conformance, Section 4.4.2 of the MAC Tailings Guide states that:

Processes to manage change should include succession planning for key roles related to tailings management, including the Responsible Person(s), EOR, and Independent Reviewer(s). For external roles such as the EOR and Independent Reviewer(s), this could include having documented terms of reference, descriptions of required qualifications, and a documented process for filling external roles in the event of change.

II.8 Independent Review

MAC strongly supports the requirement to conduct Independent Review (IR). As stated in the MAC Tailings Guide:

IR provides Owners with independent, objective, expert commentary, advice, and, potentially, recommendations to assist in identifying, understanding, and managing risks associated with tailings facilities. The primary purpose of IR is to provide an opinion to the Owner's Accountable Executive Officer (see Section 4.3) regarding:

- Completeness/appropriateness of the risk assessment and understanding.
- Effectiveness of tailings governance and the tailings management system.
- Whether the tailings facility is being effectively managed based on sound engineering practices.
- Whether the risk assessment and the acceptable level of risk should be reviewed and updated.

- Whether concepts and design criteria for the facility are consistent with legal requirements, industry guidelines and best practices, and current theory, methodologies and experience.
- Areas for improvement in the management of the tailings facility.

The objectives are to:

- Facilitate informed management decisions regarding a tailings facility so that tailings-related risks are managed responsibly and in accordance with an acceptable standard of care.
- Ensure that the Accountable Executive Officer has a third-party opinion regarding the risks and the state of the tailings facility and the implementation of the tailings management system, independent of the teams (employees, consultants, and contractors) responsible for planning, designing, constructing, operating, and maintaining the facility.

In the draft Standard there are a number of requirements that refer to IR:

- Requirement 2.2: assess and review the alternatives analysis
- Requirement 4.2: provide input to decision to rebut the requirement to design for 'Extreme' Consequence Classification
- Requirement 4.3: provide input to approval of implementation of measure to reduce the risks of a potential failure
- Requirement 6.4: review the DBR
- Requirement 7.8: review the ESMS and monitoring results
- Requirement 11.5: provide ongoing senior independent review of the planning, siting, design, construction, operation, maintenance, monitoring, performance and risk management at appropriate intervals across all stages of the tailings facility lifecycle

MAC recommends grouping these requirements under a single principle, focused on IR. This will help to put greater emphasis on the importance of IR and provide a more cohesive set of requirements for IR across the life cycle.

MAC also recommends using the term Independent Review and not using the terms Independent Technical Review Board (ITRB) and senior independent technical reviewer. There are a number of reasons for this:

- An ITRB is a specific mechanism for achieving the outcome of having an IR. As described in section II.2.2, the requirements should focus on outcomes.
- The use of senior independent technical reviewer is not consistent. It is also confusing, since an almost identical term is used in other contexts. For example, Requirement 11.3 requires that "The EOR or a senior independent technical reviewer shall conduct annual tailings facility construction and performance reviews."
 - It is not clear what is meant by senior independent technical reviewer in this requirement, since the role of the EOR and IR are distinctly different and not interchangeable.

The draft Standard does not define what is meant by 'independent' beyond a statement in Requirement 2.2 regarding "with no conflicts of interest". MAC recommends that independent be defined and used specifically in the context of IR, noting that this term is also used in the section "The Role of the State" in reference to States.

The MAC Tailings Guide addresses this in Appendix 4:

The intention, or spirit, of "independent" is that the reviewer(s) should not be directly involved with the design or operation of the particular tailings facility. Where potential conflict of interest exists, such conflicts should be identified and declared so the Owner understands when 'independence' is theoretically compromised and agrees. For example, it is acceptable to have an Independent Reviewer who is employed by the same company as the EOR for the tailings facility, provided the intent of 'independent' is met. This is further reinforced by maintaining a clear understanding between the Owner and their consultant(s) (e.g., designer, EOR) that an Independent Reviewer may need to abstain from a discussion or withhold an opinion when a conflict of interest may apply. This flexibility allows the IR process to maximize the use of appropriately qualified reviewers; understanding that there may be a limited pool of such qualified individuals available.

MAC also has one comment specific to Requirement 11.5.

REQUIREMENT 11.5: For tailings facilities with 'Very High' or 'Extreme' Consequence Classification, the ITRB, reporting to the Accountable Executive and/or the Board, shall provide ongoing senior independent review of the planning, siting, design, construction, operation, maintenance, monitoring, performance and risk management at appropriate intervals across all stages of the tailings facility lifecycle. For facilities with other consequence classifications, the ongoing senior independent review can be done by a single person.

Notwithstanding the comments above about consequence classification, facilities that do not have a very high or extreme consequence may still be very complex and not suitable for IR by a single person. The most appropriate IR mechanism for a given facility should be determined on a site-specific basis, based on the outcomes of the risk analysis.

MAC also notes that the strong emphasis of the draft Standard on tailings facilities with Very High or Extreme consequence classification may create a sense of complacency for facilities with a lower consequence classification. As noted above, such facilities may be just as complex as those with a Very High or Extreme consequence classification and the management of such facilities may require the same level of diligence and care. However, the implicit message in the draft Standard is that such facilities do not require the same level of care.

II.9 Operator versus Owner

The draft Standard defines Operator as:

Any person, corporation, partnership, owner, affiliate, subsidiary, joint venture, or other entity, including any State agency, that owns, operates or controls a tailings facility.

In comparison, MAC uses the term Owner, which is defined as:

The company, partnership, or individual who has legal possession or is the legal holder of a tailings facility under law in the applicable jurisdiction where the facility is located. For example, the company, partnership or individual that owns the mine from which the tailings and

wastewater are generated is the owner of those tailings and can be considered the Owner of the tailings facility.

In the case of joint ventures or similar projects, there may be more than one company involved in Ownership. In such cases, the Owner would comprise all companies that are represented on the Board of Directors and are involved in decision-making.

We are concerned about the potential unintended consequences of the use of the term Operator as defined above. Specifically, this definition could allow the legal owner of a tailings facility to absolve itself of accountability if it has contracted out all aspects of tailings management to a third party. There are cases where this is done. In such cases, the Standard would apply to the third-party operator, and not to the owner of the tailings facility. It is the Owner who must be ultimately accountable, not the Operator.

MAC recommends that the Standard adopt the term Owner and adapt MAC's definition to include specific reference to a State agency, rather than using the term Operator. This would ensure that the legal owners of tailings facilities cannot absolve themselves of accountability.

II.10 Emergency Preparedness

REQUIREMENT 15.1: Prepare and implement a site-specific Emergency Response Plan (ERP) based on credible tailings facility failure scenarios and the assessment of potential consequences, using the knowledge base. Update regularly, including during closure.

MAC supports the requirement to develop site-specific ERPs, although it is not appropriate to include the word "implement" in Requirement 15.1, as such plans would only be implemented if there is an emergency. Through Indicator 2 of the *Tailings Management Protocol, TSM* requires that ERPs and emergency preparedness plans (EPPs) be developed and tested. As described in Section 5.2 of the Tailings Guide and reflected in the Table of Conformance, these requirements are quite detailed.

However, as described in Section 5.2 of the Tailings Guide:

There is a wide range of potential emergencies that may occur associated with tailings facilities, including structural failure of a facility, rising water levels within a facility, cracking of a dam, a sudden loss of environmental containment of a facility, or other events linked to the loss of one or more critical controls. There are also other types of emergencies that may affect a mine site more generally, including a tailings facility, such as a loss of power, an earthquake, or extreme conditions such as wildfire, landslide, or avalanche.

Thus, MAC's requirement is not limited to the development of ERPs and EPPs to address tailings facility failures exclusively, as does Requirement 15.1. Limiting the scope of such plans in the manner of Requirement 15.1 may limit the effectiveness of such plans and the capacity of Owners to respond to the range of other emergencies that may occur. MAC recommends that the Standard adopt a broader scope of what should be included in ERPs and EPPs, as per the MAC requirement.

Requirement 15.1 requires that ERPs be updated regularly. However, Requirement 15.4 requires testing of ERPs. The requirements to update and test should be linked. Updates need to be informed by the

outcomes of tests of ERPs. MAC requires that "the results of tests need to be evaluated to identify any deficiencies or opportunities for improving the ERP or EPP, and the plans updated accordingly." MAC recommends that the Standard adopt a similar approach.

REQUIREMENT 15.2: Meaningfully engage employees and/or employee representatives, site contractors, public sector agencies, first responders and at-risk communities to participate in emergency planning and implementation, including development of specific ERPs for at-risk communities.

The intent of this requirement is not clear, as compared the intent of Requirement 15.3. MAC recommends that this requirement be deleted.

REQUIREMENT 15.3: Meaningfully engage with public sector agencies and first responders, and other organizations involved in emergency response for the purpose of developing and implementing a site-specific Emergency Preparedness and Response Plan (EPRP). The plan shall assess the capacity and capability of emergency response services and the Operator shall act accordingly.

The intent of this requirement is similar to the intent of MAC's requirement that Owners develop EPPs. An EPP is developed by the Owner for external use (as compared to the ERP which is primarily for internal use) with input from communities of interest, including local authorities (e.g., first responders, municipal governments), and regulatory authorities. The purpose of an EPP is to assist those other parties in the development of their ERPs.

There are concerns however, with the specifics of what is required in Requirement 15.3. As described above, the onus for conformance with the Standard must be on the Owner. The Owner must be able to comply with the requirements independent of the action, or inaction, or any third parties. As worded, conformance with this requirement is dependent upon the engagement of third parties who may not exist, may not have the capacity to engage, or may not agree to engage regardless of the Owner's actions. Thus, the requirement to meaningfully engage should be revised.

Similarly, this requirement puts the onus on the Owner to assess the capacity and capability of third parties and implies that the Owner must strengthen those services as necessary.

As per the *TSM Tailings Management Protocol* and Tailings Guide, the Owner should be required to develop an EPP. Conformance should not be contingent upon the actions of third parties.

REQUIREMENT 15.4: Maintain a state of readiness at the mine site and within at-risk communities by training all appropriate personnel, public sector agencies, first responders and at-risk communities and by testing emergency response plans and procedures with all involved stakeholders.

MAC supports the importance of training and testing. However, it is not appropriate to require Owners to maintain the state of readiness of third parties. Again, conformance must not be dependent on the actions of third parties.

II.11 Long Term Recovery in the Event of Catastrophic Failure

PRINCIPLE 16: Prepare for long term recovery in the event of catastrophic failure.

MAC appreciates the spirit of this Principle and the associated proposed requirements. If a catastrophic failure occurs, it is essential to develop and implement plans for long-term recovery. However, apart from Requirement 16.1, the other requirements under this Principle should not be included in the Standard.

There are a number of reasons for this.

1. Requirements 16.2 to 16.5 are contrary to the objective of the Standard. The Introduction to the draft Standard states that:

"The Global Tailings Standard (the 'Standard') aims to achieve the safe and secure management of mine tailings facilities globally. The Standard compels Operators to use specified measures to prevent the catastrophic failure of tailings facilities and to implement best practices in the planning, design, construction, operation, maintenance, monitoring, and closure of tailings facilities."

Thus, these requirements address the very thing the Standard intends to prevent – catastrophic failure – and they could only be applied if a failure has occurred.

If the intent is that Owners would seek some sort of certification or public statement of performance of a given tailings facility against the Standard, then surely that certification would be revoked if that facility experienced a catastrophic failure. So, what is the point of these requirements? They do not contribute towards that certification, and such a certification would not exist if a failure has occurred.

- 2. Performance against Requirements 16.2 to 16.5 is not measurable.
- 3. Long-term recovery would be very site-specific, with a very strong role for State agencies in nearly all mining jurisdictions, including those with otherwise weak regulatory systems and limited capacity. Given this, it is doubtful that Requirements 16.2 to 16.5 would have any influence on post-recovery activity.

MAC recommends that Requirements 16.2 to 16.5 be addressed in the recommendations report.

Requirement 16.1 is as follows:

REQUIREMENT 16.1: Meaningfully engage with public sector agencies and other organizations that would participate in medium- and long-term social and environmental post-failure response strategies.

As per comments above, this requirement, as worded, cannot be met through the actions of the Owner, independent of third parties, and performance against this requirement could not be measured. MAC recommends that the intent of this requirement be clarified, and that it be reworded accordingly.

Part III: Comments on Specific Requirements

REQUIREMENT 1.3: Where there is	MAC supports the intent of this proposed requirement. However, it is
a potential for flow failure, conduct	overly prescriptive, and the level of detail required may not be achievable
and regularly update an inundation	in all cases.
study for the tailings facility using a	
methodology that considers	Through Indicator 2 of the Tailings Management Protocol, and further
credible hypothetical failure	described in Section 5.2.3 of the Tailings Guide, TSM also requires that
modes, site conditions, tailings	inundation studies be conducted. Section 5.2.3 states that:
facility conditions, hydraulic	
routing models of the slurry, and the amount of tailings and downstream materials entrained in the outflow. The results of the study should include estimates of the inundation area, flow arrival times, depth and velocities,	The area that could be inundated needs to be clearly defined, describing the maximum extent of flooding, flood depths, and time to maximum depth. Maps of potentially inundated areas need to be developed and included in the ERP and the EPP, identifying any downstream mine site infrastructure, communities, residences, farms, recreational facilities, roads, railways, bridges, powerlines, other infrastructure, or other features (e.g., wildlife habitat) that
duration of flooding, and depth of	could be impacted in the event that an emergency occurs.
material deposition.	MAC recommends that the Standard adopt wording for this requirement this is aligned with the wording in the MAC Tailings Guide.
	An additional concern with this requirement relates to the need to
	An additional concern with this requirement relates to the need to regularly update inundation studies. In many cases, regular updates are not necessary and would not contribute any new information. This is because inundation studies, as modelling exercises, are often conducted to model an inundation scenario at the design capacity of the tailings facility. Thus, conducting an inundation study during the design phase would yield the same results as an inundation study conducted five years into the operating life of a tailings facility with a design capacity for 15 years of operation.
	would increase the capacity of the tailings facility, there is no value in requiring regular updates to inundations studies.
REQUIREMENT 3.3: Where the	This requirement is largely focused on risk management, it is largely
risks of a potential tailings facility	redundant given the other requirements below about risk reduction.
failure could result in loss of life or	
sudden physical and/or economic	MAC recommends that the Chair and Expert Panel review the TSM
displacement of people, the	Indigenous and Community Relationships Protocol (Appendix 1) for
Operator shall consider in good	potential models for improved wording of this requirement.
faith additional measures to	In durafting this year increast, did the Chain and Furgert Danal services
resottlement following	In drafting this requirement, did the Chair and Expert Panel consider
international standards. The	(2012) prepared by the International Finance Corporation?
Operator shall communicate these	
decisions to those affected.	
REQUIREMENT 3.4: Establish an	This requirement should be under Topic II. rather than splitting
effective operational-level, non-	requirements related to project-affected people into different topics.
judicial grievance mechanism that	
addresses the concerns, complaints	MAC recommends that the Chair and Expert Panel review the TSM
and grievances of project-affected	Indigenous and Community Relationships Protocol (Appendix 1) for

people that relate to the tailings	potential models for improved wording of this requirement. The Chair
facility.	and Expert Panel may also wish to review MAC's 2015 <u>Site-Level</u>
PEOLUPEMENT 4 1 , Prosume the	Grievance and Community Response Mechanisms.
consequence of failure	Footnote 20 are not clear. If this approach is retained in the Standard.
classification of all new tailings	then these need to be clarified.
facilities as being 'Extreme' (see	
Annex 2, Table 1: Consequence	It is not clear what is meant by "permanent non-credible flow failure
Classification Matrix) and design,	state". Since Footnote 20 uses a similar phrase, it fails to provide any
construct, operate and manage the	clarification on this point.
resumption can be reputted if the	A clear measurable endnoint needs to be defined, based on established
following three conditions are met:	engineering criteria.
a) The knowledge base	
b) A design of the upgrade	
c) The consequence of failure	
classification is reviewed every	
a years, of sooner in there is a material change in any of the	
categories in the Consequence	
Classification Matrix, and the	
tailings facility is upgraded to	
the new classification within 3	
years. This review should	
proceed until the facility has	
achieved a confirmed	
'landform' status or similar	
permanent non-credible flow	
failure state.	
Footnote 20: Safe closure is	
achievement of a confirmed	
that also has a permanent non-	
credible flow failure state.	
REQUIREMENT 6.2: Apply factors	Used appropriately where it can be applied, a factor of safety can be a
of safety that consider the	tool to help assess tailings facility integrity that can help inform designers,
variability and uncertainty of	EoRs and others directly involved in tailings management, provided that
geologic and construction materials	they understand the:
and of the data on their properties,	• Limitations of factors of safety in general
the mobilized shear strength with	 Assumptions used in a specific calculation of the factor of safety:
time and loading conditions, the	 Uncertainties inherent in a specific calculation of the factor of safety;
sensitivity of the failure modes and	• Information that a calculated factor of safety will and will not provide
the strain compatibility issues, and	them to help inform their decisions
the quality of the implementation	
of risk management systems.	However, MAC has a number of concerns with the proposed requirement
	to apply factors of safety.

First is the fact that application of a factor of safety can contribute to complacency among Owners, regulators, and the public. There is an assumption by some that the factor of safety is:
 Clearly related to safety, since that is what it is called. Clearly something that is quantifiable, and therefore easy to understand and communicate – like a speed limit. Stay within the speed limit, and you are fine.
Both of these statements are at best highly flawed, at worst, completely false. In reality, a factor of safety can be a misleading indicator of the safety of a tailings facility. Furthermore, the use of the factor of safety is only a part of the assessment of the level of safety of a tailings facility.
Safe, responsible tailings management is complex, as the Standard endeavours to make clear. Any efforts, by regulators, senior management of mining companies, or others, to distill tailings safety down to a number is fraught with risk. Ultimately, even if the importance of other aspects of tailings management are recognized, the application of a factor of safety can lead people to believe that as long as the factor of safety is being met, all is good.
Ultimately, one of the outcomes of the Standard needs to be improved global practice in tailings management. This Requirement will not achieve that outcome.
Second, a factor of safety is not relevant or applicable at some tailings facilities, and the calculated number does not mean the same for all facilities. For example, the same calculated factor of safety (e.g., 1.5) can have quite different meaning for tailings that are cohesive compared to tailings that are frictional. Similarly, a low factor of safety of 1.3 would be very conservative for a facility with no credible failure modes, whereas a different facility could have a higher number despite having multiple credible failure modes and a higher consequence classification. The lower number for the first facility does not, in this case, mean that that facility is less safe than the second facility. Just the opposite is true. The numbers do not tell the whole story, or even an accurate or meaningful story.
Ultimately, a factor of safety is just one tool that can be used to analyse structural integrity of tailings facilities and is far from the best tool for many facilities. Each tool that is available has strengths and limitations than need to be understood in the application and interpretation of such analyses. For example, deformation analyses can be used to understand the behaviour of more complex systems.
Instead of requiring application of a factor of safety, MAC recommends that the Standard require the application of an "appropriate analyses of the integrity of the infrastructure". The determination of the method(s) used would be evaluated and endorsed by the designer, EoR, and Independent Reviewers.

	MAC also notes that the proposed Requirement, as written, is not clear and performance against this requirement could not be measured. The Requirement, as written, says "Apply factors of safety" and then lists considerations. It is not clear what factors of safety are to be applied to. Does the balance of the Requirement identify factors to be considered in the calculation of the factor of safety or in the application? The reference at the end of the Requirement to "quality of the implementation of risk management systems" is completely unclear since everything else listed in the Requirement speaks to quantifiable material characteristics.
REQUIREMENT 7.1: Build, raise, operate, monitor and close the	As per the comments above in section II.2, this requirement is too broad and lacks specificity.
tailings facility according to the	
design intent of all stages of the	MAC recommends that this requirement be deleted. Its constituent
tailings facility lifecycle, using	elements are already addressed in various other requirements, and it
qualified personnel and	does not add anything.
appropriate methodology,	
equipment, procedures, data	
environmental and social	
management system (FSMS)	
BEOUIREMENT 7.8: Independent	This is outside the scope of Independent Review of tailings management
senior technical reviewers, with	since an ESMS is site-wide and integrates many elements not related to
qualifications and expertise in	tailings management
social and environmental sciences	
and performance management,	
shall carry out a full review of the	
ESMS and monitoring results every	
3 years, with annual summary	
reports provided to relevant	
stakeholders.	
REQUIREMENT 8.2: Establish	Effective internal reporting is essential to the safe management of tailings
criteria and performance	acilities. However, the draft standard is weak in this regard.
narameters and include them in	Requirements 8.2 to 8.4 are the only requirements that specifically
the design a monitoring program	address internal reporting other than those that address lines of
that measures performance at all	communication (e.g., between the EoR and Accountable Executive
stages of the tailings facility	Officer). These requirements, alone and as written, are not adequate to
lifecycle. Record, evaluate and	ensure effective internal communications regarding tailings management.
publish the results at appropriate	
frequencies. Based on the data	Internal reporting needs to happen at different time scales and in
obtained, update the monitoring	different ways. It is imperative that the Owner specify internal reporting
program throughout the tailings	requirements in the OMS manual, not just for surveillance activities, but
facility lifecycle to confirm that it	also for reporting related to operation and maintenance activities. MAC
remains effective.	recommends reviewing the MAC OMS Guide and the Table of
DEOLUDENTENT 9 3: Anolugo	Conformance.
REQUIREIVIENT 8.3: Analyze	Performance evaluation and management reviews for continual
recommended by the FOR and	improvement are also integrated into a tailings management system
assess the performance of the	These are the check and act steps in the management system cycle of
facility clearly identifying and	nlan-do-check-act. See sections 6 and 7 of the MAC Tailings Guide for
presenting evidence on any	further details, as well as the Table of Conformance. Indicator 4 of the
deviations from the expected	· · · · · · · · · · · · · · · · · · ·

performance and any deterioration	TSM Tailings Management Protocol specifically requires annual tailings
of the performance over time.	management reviews.
FOR for review and update the risk	MAC recommend that the Standard address in a more comprehensive
assessment and design if required	manner improved requirements for internal reporting linking to
Performance outside the expected	requirements for both tailings management systems and OMS manuals.
ranges shall be addressed swiftly	
through critical controls or trigger	In addition, Requirement 8.2 mixes very important but different concepts.
response action plans (TARPs).	Establishing performance objectives and associated indicators and criteria
	for tailings management are extremely important. However, this is a
REQUIREMENT 8.4: Report the	higher-level activity and should not be included under a Principle that
results of the monitoring program	addresses monitoring systems. Establishing and refining performance
at the frequency required to meet	objectives are integral to the planning and design phases and objectives
company, regulatory and public	need to be reflected in the design basis for the tailings facility as well as
disclosure requirements, and as a	the closure plan. All aspects of OMS, not just surveillance, must be
minimum on a quarterly basis. The	aligned with the performance objectives. This requirement needs to be
RIFE and the EOR shall review and	split, with a requirement to establish performance objectives included as
approve these reports.	part of the requirements for planning and design.
	The reference in Requirement 8.2 to publishing results should be deleted,
	since disclosure is addressed under Topic VI. All requirements related to
	disclosure should be in one place in the Standard. In addition, a
	requirement to publish would imply publication of raw data. Publication
	is raw data is neither appropriate nor helpful in the context of public
	disclosure, as raw data is meaningless for anyone without the technical
	knowledge required to understand and interpret that data
	Requirement 8.4 also mixes both internal and external reporting, which
	are quite different.
	 Reporting to meet regulatory requirements should be addressed as
	part of a conformance management plan, developed and implemented
	as part of the tailings management system (see section 4.4.1 of the
	MAC Tailings Guide).
	Public disclosure is addressed under Topic VI and should not be
	included here.
REQUIREMENT 9.1: For a proposed	The way that Requirement 9.1 is worded, it is not clear what would
new facility where a potential	happen if there are no further steps an Owner can take to minimize
creaible failure could have 'Very	consequences.
the Board or senior management	
(as appropriate based on the	
Operator's organizational	
structure) shall be responsible for	
approving the proposal, after	
deciding what additional steps shall	
be taken to minimize the	
consequences.	
REQUIREMENT 10.2: A member of	This requirement should refer specifically to the Accountable Executive
senior management shall be	Officer. Senior management does not necessarily mean an executive-level
accountable for the safety of	person.
cannigs facilities and for minimizing	
the social and environmental consequences of a tailings facility failure. This Accountable Executive will also be accountable for a program of tailings management training, for emergency preparedness and response, and for recovery after failure. The Accountable Executive or delegate must have regular scheduled communication with the Engineer of Record (EOR). ²⁵ Footnote 25: In the case of joint ventures, all venture partners shall appoint an Accountable Executive and it shall be the responsibility of the partners to jointly implement this Requirement.	 Scheduled communication with the EOR is important, but it should also be stated that the EOR must have a direct line of communications to the Accountable Executive Officer. This gives the EOR authority to contact the Accountable Executive Officer directly should the EOR have concerns. Footnote 25 is potentially problematic and overly prescriptive. The way to approach this needs to be determined on a JV-specific basis. Three different examples to illustrate challenge of this requirement for JVs: 1) Some junior JV partners with a small stake in a project (e.g., 10%) may have very limited involvement in decision making. If such partners were to appoint an Accountable Executive Officer that person's role would be very limited compared to the role of main JV partners and it would not be reasonable to require direct communications between the EOR and the Accountable Executive Officer of such junior partners. Does a junior JV partner need an Accountable Executive Officer? 2) In some JVs, one partner plays the lead role as operator of the mine and tailings facility. Clearly, that partner needs an Accountable Executive Officer, and if so, what role would those persons play? 3) In some JVs, an operating company is formed. In such cases, the operating company needs to have an Accountable Executive Officer. But if the JV partners have Accountable Executive Officer. But if the JV scenario is, there must be clear and direct communications between partners about tailings management, risks, and how those risks are being management. However, the role and relationship with the Accountable Executive Officer of the operating company?
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REQUIREMENT 10.3: Appoint a	MAC supports the intent of this requirement. Through Indicator 3 of the
site-specific Responsible Tailings Facility Engineer (RTFE) who is accountable for the integrity of the tailings facility, liaises with the EOR, the Operations and the	<i>Tailings Management Protocol, TSM</i> requires that accountability, responsibility, authority, and role be defined and documented for a Responsible Person. Section 4.3 of the MAC Tailings Guide describes the Responsible Person as follows:
Planning teams and who either reports directly to the Accountable Executive, or via a reporting line that culminates with the Accountable Executive. The RTFE will have a dotted reporting line to	As a minimum, the Owner should designate one Responsible Person for each tailings facility. During initial construction, and operations and ongoing construction, there should be a Responsible Person immediately available at all times. The Responsible Person(s) has clearly defined, delegated responsibility for tailings management and appropriate qualifications. There may also be a designated Responsible Person at the corporate level.

mine management to represent the delivery of services to the site.	The Responsible Person(s) identifies the scope of work and budget requirements (subject to final approval) for all aspects of tailings management, including the EoR, and will delegate specific tasks and responsibilities for aspects of tailings management to qualified personnel.
	However, MAC has concerns with the specifics of Requirement 10.3.
	Most importantly, the use of the term Responsible Tailings Facility Engineer specifies that that person must be an engineer. MAC states that the Responsible Person must have appropriate qualifications but does not prescribe that the Responsible Person must be an engineer. This is intentional. Tailings management is multi-disciplinary in nature and requires the involvement of personnel with expertise not just in engineering, but also in geosciences, hydrogeology, and other related disciplines. A Responsible Person can be from any of these related disciplines. They do not have to be an engineer.
	Furthermore, although the intent of MAC's requirement is aligned with Requirement 10.2, MAC members could be out of conformance with this requirement if their Responsible Person is not an engineer. This is inappropriate, and another illustration of the overly prescriptive nature of some of the requirements in the draft Standard.
	MAC recommends that the term Engineer be replaced with Person. It may be preferable to harmonize with the MAC term Responsible Person, given the wide uptake of MAC guidance, not just among MAC members.
	This proposed requirement is also inappropriate in its prescription of reporting requirements. The critical aspect related to the role of Responsible Person is that the Responsible Person must have a direct line of communications to the Accountable Executive Officer. They must be able to contact the Accountable Executive Officer directly, without fear of sanction or repercussions, if they have concerns.
	The wording of the proposed requirements attempts to capture this by specifying how an Owner must organize itself. This is not appropriate. It does not matter who the Responsible Person reports to as their direct supervisor. What is essential is the line of communications between the Responsible Person and the Accountable Executive Officer. Similarly, the organization chart presented in Annex 3 is also not appropriate.
REQUIREMENT 11.3: The EOR or a senior independent technical reviewer shall conduct annual tailings facility construction and performance reviews	This requirement needs to be clarified. The objective of this review is not clear, relative to the existing need for performance evaluation and management reviews as part of the implementation of a tailings management system.
	There is confusion between the role of the EOR and the "independent technical reviewer". The scope of performance evaluation and management reviews is broad, and as such needs to be conducted by a team, not just the EOR.

REQUIREMENT 11.4: A senior independent technical reviewer shall conduct an independent DSR	MAC has a number of concerns with this proposed requirement.1. The draft Standard does not provide a definition of DSR. MAC
periodically (every 3 to 10 years, depending on performance and complexity, and the Consequence	recommends that the definition from the MAC OMS Guide be adopted and included in the Glossary of the Standard:
Classification of the tailings facility). The DSR shall include technical, operational and governance aspects of the tailings facility and shall be done according to best practices. The DSR	Dam Safety Review (DSR): A systematic review and evaluation, carried out at scheduled intervals, of all aspects of design, construction, operation, maintenance, and surveillance, and other relevant processes and systems affecting a dam, to evaluate the design criteria with current standards, operational compliance with design intent, stability and functionality of the dam, and to identify
contractor cannot conduct a subsequent DSR on the same	appropriate remedial measures.
facility.	 The Requirement begins by stating that a DSR must be performed by "a senior independent technical reviewer". There are two concerns with this:
	 The use of this term is potentially very confusing, since an almost identical term is used in the context of Independent Review. However, those involved in providing Independent Review would not be involved in performing DSRs. These are completely different functions. However, this is not at all clear based on the wording used, which makes it sound like they are one in the same. The Standard should not prescribe that a DSR must be done by persons who are independent. DSRs can be performed affortively by persons who are who would not prescribe that a definition of
	independent, including persons who would not meet the definition of independent, including persons who are employees of the Owner and persons who are consultants. This is a case where, as per MAC's comments above in section II.2, the Standard should focus on outcomes and not prescribe "how" or who".
	3. The proposed Requirement includes governance reviews within the scope of DSRs. Governance reviews are important. However, they require a different skill set than that usually required to conduct DSRs. MAC recommends that governance reviews not be included in the scope of DSRs.
	 MAC recommends that the last sentence of this requirement be deleted. The Standard should not prescribe that a DSR must be conducted by a different contractor each time. There are both philosophical and practical reasons for this.
	There is potential value in having different people involved each time, to get "fresh eyes" and a fresh perspective in each successive DSR. However, in other cases, continuity is also valuable. For some very complex scenarios it may be best to use the same persons to conduct successive DSRs. The learning curve for new persons may be very steep and using the same persons, one who already have an understanding of the complexities of the facilities, may reduce the likelihood that something is overlooked or mis-interpreted in

	conducting the DSR. This continuity is also helpful in tracking
	implementation of recommendations from the previous DSR.
	Another approach that some Owners use is to alternate between
	contractors in successive DSRs.
	The more practical concern is that there is a limited number of
	people with the knowledge and experience required to conduct
	DSRs, and it will be difficult to find people to conduct DSRs.
	Prescribing that a different contractor needs to be used each time
	will make this even more challenging.
REQUIREMENT 14.3: Initiate	It is not clear why this requirement refers to stakeholders, while
prompt investigations of all	Requirements 13.5, 14.1 and 14.2 refer to employees and contractors.
complaints and grievances, swiftly	Inese requirements are all under Topic IV Management and Governance, which is focused internally, not externally,
resolve concerns and complaints	• External grievances are addressed in requirement 3.4
and provide remedy as required.	
REQUIREMENT 15.3: Meaningfully	It is not clear what is meant by "and the Operator shall act accordingly"
engage with public sector agencies	nor is it clear how this could be audited. This needs to be clarified or
and first responders, and other	deleted.
organizations involved in	The actuation and inclusting of Easter to 22 and so have done
emergency response for the	concerning
implementing a site-specific	concerning.
Emergency Preparedness and	As has been seen in the resources deployed to respond to recent failures,
Response Plan (EPRP). The plan	the public sector agency resources deployed in some emergency
shall assess the capacity and	response situations were very significant. In the case of both recent
capability of emergency response	failures in Brazil, this included deployment of military and police
services ²² and the Operator shall	personnel on the ground, and the use of helicopters operated by the military police, and other public sector agencies. In the case of a rick of
	failure of a water dam for the Toddbrook Reservoir in the United
Footnote 32: Where gaps remain in	Kingdom in the summer of 2019, military heavy lift helicopters were
the capacity of public sector	deployed to help avert a collapse of the dam. In the case of the January
agencies to provide required	2019 failure near Brumadinho, international search and rescue teams
emergency response services for	were also deployed, coming for example from Israel.
credible failure scenarios, the	
Operator will provide them.	In the absence of such police and military capability, this footnote implies
	having access to a small fleet of heliconters in case a failure occurs. Given
	the importance of being able to respond extremely quickly, as the police
	and military did in both cases in Brazil, this means that if such capacity is
	absent then the Owner would need to have such capability on immediate
	standby at all times, as are the police and military.
	It is neither reasonable nor appropriate to expect the Owner to take on
	the role of the police and military, and to maintain such specialized and
	extremely expensive emergency response capacity on hand at all times.
	This footnote needs to be removed, and as noted above the statement in
	Requirement 15.3 that the Operator shall act accordingly needs to be
	clarineu.

REQUIREMENT 17.1: Publicly disclose relevant data and information about the tailings facility and its consequence classification in order to fairly inform interested stakeholders.	MAC understands the spirit of this proposed requirement. However, "relevant" and "fairly" are both subjective terms, which will make this difficult to audit against. In particular, the wording of the requirement is potentially very broad, depending on how "relevant" is interpreted. The proposed requirement also lacks any specified timeframe.
	MAC recommends that the wording of this requirement be more specific. Information to be disclosed should include, as a minimum:
	 Description and the status of the tailings facility Risks posed by the tailings facility Any specific risks to communities in the event of a failure General description of risk management measures implemented to reduce the potential consequences or likelihood of a failure Summary of status of implementation of the Standard
	Owners may choose to disclose more specific or detailed information on a site-specific basis, but the proposed bullets above provide a reasonable minimum requirement.

Appendix 1: TSM Indigenous and Community Relationships Protocol

Towards Sustainable Mining

Indigenous and Community Relationships Protocol



TSM ASSESSMENT PROTOCOL

A Tool for Assessing Indigenous and Community Relationships Performance

Purpose

The purpose of the assessment protocol is to provide guidance to facilities in completing their evaluation of Indigenous and community relationships performance against *Towards Sustainable Mining (TSM)* indicators. The assessment protocol sets out the general expectations for Indigenous and community relationships as part of the *TSM* initiative. This protocol supports implementation of the *TSM Mining and Indigenous Peoples Framework*. As with any assessment of a management system, professional judgment is required in assessing the degree of implementation of a system indicator and the quality of management processes and intervention. Application of this protocol will, therefore, require a level of expertise in auditing and systems assessment and knowledge of and experience in the practice of Indigenous and community relationships. This assessment protocol provides an indicator of the *TSM* initiative. It is not, of itself, a guarantee of the effectiveness of Indigenous and community relationships activities.

Performance Indicators

The Indigenous and Community Relationships Protocol contains five indicators:

- 1. Community of Interest (COI) Identification
- 2. Effective COI Engagement and Dialogue
- 3. Effective Indigenous Engagement and Dialogue
- 4. Community Impact and Benefit Management
- 5. COI Response Mechanism

Indigenous Engagement

In some jurisdictions, including Canada, Indigenous people have rights that are different than neighbouring communities, and the inclusion of an Indigenous indicator is therefore appropriate for these contexts. Indicator 3 of this protocol is intended to confirm that mining facilities are actively building meaningful relationships and implementing engagement and decision-making processes with Indigenous communities. This includes aiming to achieve free, prior and informed consent (FPIC) for impacts on rights of directly affected Indigenous peoples before proceeding with development and maintaining it throughout the life of the project. This indicator also confirms that efforts are made to ensure that Indigenous peoples have equitable access to opportunities with the company. Furthermore, this indicator seeks to ensure that management and designated employees are educated on the history of Indigenous peoples and receive skills-based training in intercultural competency, conflict resolution, human rights, and antiracism. Indicator 3 builds on the engagement and dialogue systems described in Indicator 2 of this protocol. For companies applying this protocol outside of Canada, Indicator 3 is applicable where a facility may impact traditional lands, rights and resources of Indigenous peoples.

Implementation of Indicator 3 is guided by the principles, norms and standards of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), as well as applicable legal / regulatory requirements. Recognizing the duty of governments to consult Indigenous peoples prior to the adoption of measures that may affect them directly, and in particular in relation to





projects that affect their traditional territories, companies are not expected, nor should they attempt to replace the government's responsibilities related to consultation. This indicator focuses on evaluating whether facilities are working to build and maintain meaningful relationships, respectful engagement and decision-making processes towards achieving and maintaining the support of affected Indigenous communities. The criteria of this indicator focus on the establishment of frameworks to reach mutually acceptable arrangements through collaboration and in good faith.

In the Canadian context, discussions among Indigenous peoples, government and industry related to Indigenous participation in resource development decision making must be rooted in a shared understanding of FPIC and respect Canada's laws and constitutional frameworks. Similarly, application of FPIC must respect local laws and constitutional frameworks when being applied outside of Canada. The Mining Association of Canada (MAC) supports the view of FPIC as a process of engagement with a goal of achieving and maintaining broad support, but where unanimous consent may not be possible.



1. COMMUNITY OF INTEREST (COI) IDENTIFICATION

Purpose

To confirm that processes are in place to identify COI, including Indigenous communities and organizations, affected or perceived to be affected by the company's operations and activities or who have a genuine interest in the performance and activities of a company and/or operation. Processes should ensure that COIs are reconsidered periodically throughout the facility's life.

COI Identification: Assessment Criteria

LEVEL	CRITERIA
С	• The facility does not meet all level B criteria.
В	Some COI have been identified.A process for identifying COI is being developed.
Α	 A documented process is in place for COI identification at the facility level that is able to determine a wide range of interests and concerns. The process also includes: A mechanism for COI to self-identify. Descriptions of relevant attributes for identified COI and a process in place to ensure related information is up-to-date. Provisions to protect confidentiality, where requested by a particular COI. COIs are reconsidered periodically throughout the facility's life. The facility maintains a record of identified COI, which is regularly reviewed and updated.
AA	 The documented process includes the identification of: Under-represented COI within the local context. COI whose interest in the operation may be indirect and issuesbased (e.g., provincial, national and international NGOs). COI are invited to provide input into how the facility identifies COI.
ΑΑΑ	 Periodic reviews of the COI identification system done in collaboration with COI to allow for continual improvement. COI input is considered in updates to the COI identification process. Where COI input is not incorporated, feedback has been provided to the COI on why input was not incorporated.





COI Identification: Frequently Asked Questions

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6	How should regional engagement approaches be reflected within the assessment?	19
11	How can a facility demonstrate that processes include consideration for COI identified as under-represented?	20



2. EFFECTIVE COI ENGAGEMENT AND DIALOGUE

Purpose

To confirm that processes have been established to support development and maintenance of meaningful relationships with COI, including Indigenous communities and organizations, to gain mutual understanding of viewpoints, to build effective relationships, and to create shared value and mutual benefits.

Effective COI Engagement and Dialogue: Assessment Criteria

LEVEL	CRITERIA
С	The facility does not meet all level B criteria.
В	 The facility provides assistance, where appropriate, to ensure COI are able to participate in engagement and dialogue processes. Some internal reporting on COI engagement and dialogue activities takes place. Informal engagement processes are in place, and occasional dialogue occurs with COI. Formal COI engagement processes are being developed, but they have not been implemented.
Α	 Documented COI engagement and dialogue processes, which were designed with input from COI, are in place. Processes are in place to review results from COI engagement with senior management and affected COI on a regular and pre-defined frequency. Communications are written in the local language for COI (if requested) and are written in language that is clear and understandable to COI. Relevant materials are provided to COI for review in an accessible and timely manner. Processes exist to identify the needs of COI for capacity building to allow them to engage in effective participation on issues of interest or concern to them. Engagement and dialogue training are provided to designated personnel, including appropriate culturally specific training. Public reporting¹ on COI engagement takes place, including the types of engagement that have taken place in the reporting period and the topics/themes of the engagement.
AA	 Engagement processes are reviewed with COI to ensure they can effectively participate in identifying issues and opportunities and influence decisions that may interest or affect them.

¹ Where COI identification/concerns are considered confidential, public disclosure of the company's relationship with the COI, their concerns and the company's response are not required.





	• •	The facility has a consistent history of meaningful engagement with COI. Processes include consideration for COI identified as under-represented. Processes to build the capacity of COI to allow them to effectively participate in dialogue exist.
	•	COI contribute to periodic reviews of engagement processes to allow continual improvement.
	•	COI feedback on engagement and outcomes is actively sought and publicly reported.
	•	Opportunities exist for COI to provide feedback on public reporting.
	•	Engagement processes are co-developed with COL where possible, and
		include mechanisms for resolving disputes.
	•	include mechanisms for resolving disputes. COI are engaged in joint decision making on agreed to matters that directly affect them and/or they have an interest in.
AAA	•	 include mechanisms for resolving disputes. COI are engaged in joint decision making on agreed to matters that directly affect them and/or they have an interest in. A review of the effectiveness of the engagement system has been conducted with COI and identified corrective actions are being implemented.





Effective COI Engagement and Dialogue: Frequently Asked Questions

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25	How is "senior management" defined?	25



3. EFFECTIVE INDIGENOUS ENGAGEMENT AND DIALOGUE

Purpose

This indicator is intended to confirm that mining facilities are actively building meaningful relationships and implementing engagement and decision-making processes with Indigenous communities. This includes aiming to achieve free, prior and informed consent (FPIC) for impacts on rights of directly affected Indigenous peoples before proceeding with development and maintaining it throughout the life of the project. This indicator also confirms that efforts are made to ensure that Indigenous peoples have equitable access to opportunities with the company. Furthermore, this indicator seeks to ensure that management and designated employees are educated on the history of Indigenous peoples and receive skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.

Effective Indigenous Engagement and Dialogue: Assessment Criteria

LEVEL	CRITERIA
С	• The facility does not meet all level B criteria.
В	 Demonstrated commitment to Indigenous engagement is evident. Informal engagement processes are in place, and occasional dialogue occurs with directly affected Indigenous communities. Processes are being developed (or are in place) to engage in dialogue with Indigenous communities to determine what is important to them and these approaches are being informed by local language(s), customs and laws. Processes are being developed (or are in place) to ensure the competency of designated employees and/or to provide training in: Delegated consultation requirements. The history, traditions and rights of affected Indigenous peoples. Intercultural awareness and engagement.
A	 Demonstrated senior management commitment to Indigenous engagement, consistent with the intent of the <i>TSM Mining and Indigenous Peoples Framework</i>, is in place and includes commitments to: Meaningful ongoing engagement. Building respectful relationships. Aiming to obtain the free, prior and informed consent (FPIC) of directly affected Indigenous peoples before proceeding with new projects or expansions where impacts to rights may occur. Ensuring that Indigenous peoples have equitable access to opportunities related to the facility. Aiming to provide long-term sustainable benefits to affected Indigenous communities. Processes are established to engage with directly affected Indigenous communities that: Seek to understand what is important to the community, including culturally significant sites, how their rights and interests may be



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	affected and how to mitigate adverse impacts on those rights and interests.
	 Are informed by local language(s), traditions, customs, Indigenous governance and engagement processes where already established by affected Indigenous communities.
	 Are designed to build meaningful relationships and respectful engagement towards achieving and maintaining broad ongoing support.
	 Ensure that cultural, spiritual and/or Indigenous knowledge is sought from local Indigenous communities and organizations and is respectfully applied to inform decisions and practices, where appropriate.
	 The facility works with directly affected Indigenous communities to identify opportunities for collaboration which could include, but are not limited to, local education, training, employment, business opportunities, revenue opportunities and economic development projects.
	 The facility aims to reach mutual agreement with directly affected Indigenous communities regarding culturally significant sites impacted by the facility, where they exist.
	 Processes are in place and implemented to ensure the competency of designated employees and/or to provide training in:
	 Delegated consultation requirements.
	\circ The history, traditions and rights of affected Indigenous peoples.
	 Intercultural awareness and engagement.
	 Engagement processes have been or are in the process of being collaboratively developed with directly affected Indigenous communities (unless engagement protocols already established by the communities have been adopted by the facility). This includes developing processes for: Determining how the facility and directly affected communities will seek agreement
	 Determining how traditional decision-making processes are incorporated, where they exist.
	 Effectively resolving disputes.
AA	 Mutually agreed upon objectives have been established for identified opportunity areas in collaboration with directly affected Indigenous communities and are in the process of being implemented.
	 Education, awareness and/or training on the history, traditions and rights of Indigenous peoples, and intercultural awareness and engagement is:
	 Available to all employees.
	 Provided to personnel beyond management and designated employees, with the intent of reaching all employees.
	 Education and awareness content is: Collaboratively designed and/or delivered with Indigenous communities.
	 Regularly reviewed and updated through involvement with COI.

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	 Engagement processes, as described in Level AA, have been implemented and have resulted in agreements or mutually agreed to commitments with directly affected Indigenous communities. The facility can demonstrate that it is maintaining the terms of agreements and commitments and is tracking their implementation.
	 The facility is collaborating with communities on mutually identified objectives identified in Level AA and can provide evidence of progress towards outcomes or benefits.
	 A collaborative assessment process is in place to measure progress in meeting objectives and includes: Verification of performance with COL
	 Incorporation of adaptive management that can address instances where objectives are not consistently met.
AAA	 Commitment to enhancing awareness on the history, traditions and rights of Indigenous peoples, and intercultural awareness and engagement is demonstrated by at least three of the following:
	 Facility-wide education, awareness and/or training on the history, traditions and rights of Indigenous peoples, and intercultural awareness is provided to employees on a regular basis.
	 On site cultural activities are supported by the facility.
	 The facility facilitates and encourages the participation of personnel in community events.
	 The facility contributes to or participates in local, regional and/or national level awareness initiatives.
	 Awareness and education efforts are regularly assessed for effectiveness.
	 Awareness and education efforts are expanded beyond the facility.
	 Traditional and cultural activities/protocols are integrated into business practices.





Effective Indigenous Engagement and Dialogue: Frequently Asked Questions

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14	How can competency in Indigenous engagement and regulatory consultation requirements be demonstrated?	22
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16	How can a facility that is not within proximity of an Indigenous community demonstrate adherence to the criteria in Indicator 3?	22
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4. COMMUNITY IMPACT AND BENEFIT MANAGEMENT

Purpose

To confirm that processes have been established to ensure that adverse community impacts, including human rights impacts, are identified, avoided and mitigated and that processes are in place to encourage and optimize social benefits generated from the facility. Additionally, this indicator seeks to confirm that facilities identify and engage with COI on potential adverse environmental impacts that may directly affect communities, including those associated with tailings management (as applicable), and potential adverse impacts related to community safety and health.

Community Impact and Benefit Management: Assessment Criteria

LEVEL	CRITERIA					
с	The facility does not meet all level B criteria.					
	 Demonstrated senior management commitment to identify and mitigate potential and actual adverse impacts related to the facility's activities that directly affect COI and work to optimize benefits to those communities. Roles and responsibilities for implementing commitment have been assigned 					
в	 Actual and potential adverse impacts related to the facility's activities that directly affect COI have been identified by the facility. 					
	 The facility can demonstrate some efforts to mitigate identified adverse impacts. 					
	 Decisions related to contributions to the community are managed informally. 					
	 The facility does some monitoring of adverse impacts, trends and management practices. 					
	 Processes are in place to engage with COI on the identification, prioritization and avoidance or mitigation of potential and actual adverse impacts related to the facility's activities that directly affect COI. 					
	 In prioritizing potential and actual adverse impacts, processes should consider the relevancy of the following on COI: 					
	 Social adverse impacts that may be attributed to the presence of the facility. 					
A	 Environmental adverse impacts that may directly affect communities including those associated with tailings management (as applicable). 					
	 Adverse impacts related to community safety and health. 					
	 Engagement processes include measures to facilitate and encourage the participation of under-represented COI and to determine which COI are most significantly impacted by identified potential and actual adverse impacts. 					





	•	Action plans for prioritized impacts have been informed through engagement with relevant COI and are being implemented.
		 Action plans include the identification of relevant objectives or targets and these are tracked, reviewed and adaptively managed with affected COI.
		 Action plans include consideration for how actions aimed at mitigating impacts can also result in optimized benefits for COI.
	•	Processes are in place to engage with relevant COI on the identification and prioritization of opportunities to optimize benefits for COI, which could include, but are not limited to, consideration of local procurement and employment.
	•	Action plans for prioritized opportunities to optimize benefits have been developed through engagement with relevant COI and are being implemented.
		 Action plans include the identification of relevant objectives or targets and these are tracked, reviewed and adaptively managed with affected COI.
	•	Processes are in place to engage with relevant COI on contributions made by the facility to community development initiatives.
	•	Contributions are communicated publicly.
	•	Baseline data is collected for prioritized adverse impacts.
	•	Metrics are established to track action plan implementation and effectiveness.
	•	Results are reviewed with affected COI on a regular and pre-determined basis.
	•	Processes are in place to avoid or mitigate prioritized adverse impacts that incorporate collaborative decision making with relevant COI.
	•	The identification and prioritization of opportunities to optimize benefits for COI consider opportunities that:
		 Benefit a broad spectrum of the community.
		 Can be self-sustaining beyond the productive life of the facility.
AA	•	Processes are in place to optimize benefits for COI that incorporate collaborative decision making with relevant COI.
	•	Decisions on how to direct contributions made by the facility to the community are made collaboratively with COI.
	•	In collaboration with COI (where possible), the facility regularly measures and analyzes the trends of identified prioritized adverse impacts. The facility also regularly measures and analyzes opportunities to optimize benefits and works with COI to prioritize and adaptively manage how gaps are addressed.
AAA	•	Where such processes do not already exist, the facility is working with COI to implement decision-making processes to empower COI to manage ongoing adverse impact mitigation and benefit optimization after the productive life of the facility ends.





	 These processes include the identification of potential partnerships and the role of relevant levels of government to ensure the mitigation and optimization can be sustained.
	 Where opportunities to minimize long term adverse impacts and/or optimize benefits beyond the productive life of the facility have been identified, they are being incorporated into long-term investment decisions and/or closure plans to ensure they can be sustained in the long-term.
•	Where COI do not already have a shared vision and community development plan (or equivalent) and where COI is interested, the facility provides support to enable COI to begin planning.
•	The facility collaborates with affected COI on reviewing the effectiveness of:
	 Actions aimed at optimizing priority opportunities for community benefits.
	 Actions aimed at mitigating adverse impacts.





Community Impact and Benefit Management: Frequently Asked Questions

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20	What are the UN Sustainable Development Goals (SDGs) and how do they relate to Indicator 4 of this protocol?	24
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5. COI RESPONSE MECHANISM

Purpose

To confirm that there are processes in place to receive, track and respond to incidents, concerns and feedback from COI, including Indigenous communities and organizations, leading towards stronger relationships and building trust.

COI Response Mechanism: Assessment Criteria

LEVEL	CRITERIA
С	• The facility does not meet all level B criteria.
в	An informal feedback process exists.A formal feedback system is either planned or in development.
Α	 A response mechanism is in place with a clear process to receive, manage and respond to COI grievances, comments and requests, which: Captures reported incidents, concerns and feedback. Assesses and determines which are grievances that require remedy. Responds in a timely manner. Is accessible. The facility has a process to track issues and concerns raised by COI, including their status, and communicates status updates. COI are proactively and clearly informed on how to access the facility's response mechanism.
AA	 The response mechanism is collaboratively developed with directly affected COI. The response mechanism is reviewed at least annually to identify opportunities for continuous improvement.
AAA	 There are mechanisms in place to escalate complaints if not adequately dealt with by the COI response mechanism. The response mechanism includes post-process follow-up with mechanism users. A review of the effectiveness of the response mechanism has been conducted and identified corrective actions are being implemented.





COI Response Mechanism: Frequently Asked Questions

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APPENDIX 1: FREQUENTLY ASKED QUESTIONS

Protocol-Specific Guidance

1. Who are Indigenous peoples?

In Canada, 'Indigenous peoples' is a collective name for the original peoples of North America and their descendants. Often, 'Aboriginal peoples' is also used. Section 35 of the Canadian Constitution, which recognizes and affirms Aboriginal rights, recognizes three groups of Aboriginal peoples: First Nations, Inuit and Métis. These are three distinct peoples with unique histories, languages, cultural practices and spiritual beliefs.

Considering the diversity of Indigenous peoples within Canada and globally, there is not an official definition of "Indigenous". According to the United Nations, the most fruitful approach is to identify rather than define Indigenous peoples.

The term "Indigenous" has prevailed as a generic term for many years. In some countries or regions, there may be preference for other terms. Additionally, some individuals may choose not to reveal or define their origin. Others must respect such choices, while at the same time work against the discrimination of Indigenous peoples.

(Adapted from the United Nations Permanent Forum on Indigenous Issues Fact Sheet: <u>https://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf</u>)

2. What is a Community of Interest (COI)?

COI include all individuals and groups who have an interest in, or believe they may be affected by, decisions respecting the management of operations. Facility COI may include, but are not restricted to:

- Indigenous peoples
- Community members
- Under-represented groups
- Employees
- Contractors/suppliers
- Neighbours
- Local environmental organizations and other non-governmental organizations (NGO)
- Local governments and institutions

Other COI may include:

- Suppliers
- Customers
- Regional or national environmental organizations and other non-governmental organizations (NGO)
- Governments
- The financial community
- Shareholders

The *TSM Indigenous and Community Relationships Protocol* is designed to measure performance at the facility level. However, companies should identify COI with an interest in



their operations beyond local COI. For example, shareholders or downstream users of mined products (e.g. jewelry manufacturing) may have an interest in the environmental and social performance of a facility. Furthermore, a company may engage with suppliers to understand the practices being employed throughout their supply chain (e.g. feed stock supplied to an operation). The way in which a facility engages with different COI will vary depending on the context. The intent of this protocol is for facilities to work with COI to determine appropriate engagement mechanisms.

3. <u>What type of assistance might be provided to COI to ensure that they are able to participate in engagement and dialogue processes?</u>

In some instances, it might be appropriate for the facility to provide assistance by way of reimbursing for travel expenses incurred as a result of engagement activities and/or providing honoraria to compensate for time and knowledge shared with the facility. Assistance may also be provided by way of company representatives meeting with COI in the community rather than having COI travel to the facility. It could also include providing access to subject-matter experts, educational material or translation services. The appropriate degree of assistance should be determined through engagement with COI.

4. Can corporate documentation be used to demonstrate facility-level commitment?

Written senior management commitment at the corporate level (e.g. a corporate policy) can only be accepted as evidence during a facility-level self-assessment or *TSM* external verification if it is accompanied by evidence that the corporate commitment is being applied and adhered to at the facility level. There must be evidence of a link between the corporate documentation and facility-level practices. If this linkage is established, then the corporate documentation can be accepted as evidence of facility-level commitment.

5. How can a facility identify directly affected Indigenous communities?

To identify directly affected Indigenous communities, the facility should have an understanding of a) Indigenous traditional lands and Treaty rights potentially affected by the organization, and b) on-going traditional use of the land for hunting, fishing, trapping and related harvest activities in the area of development. For some companies, this process is completed as part of an impact assessment through which they assess Indigenous rights to affected areas.

6. How should regional engagement approaches be reflected within the assessment?

Where multiple facilities are located within a particular region, the company may choose to adopt a regional approach to COI identification and engagement. In these cases, the division of roles and responsibilities between facility-level and regional-level personnel should be clearly understood and documented and supporting systems should be developed and implemented at the appropriate level. The *TSM* assessment should consider both facility-level and regional systems when assessing performance for each facility included within the region.

7. How can a facility demonstrate collaboration with COI?

Throughout the Indigenous and Community Relationships Protocol, there are criteria that require both collaboration with COI and co-development with COI. What collaboration and co-development look like in practice will vary depending on the priorities of COI and the local context. In some situations, this may mean co-development of an engagement plan. In others, collaboration could be demonstrated by a facility adopting a community-established engagement process. Mutually accepted approaches to collaboration should be determined through engagement with COI.



8. <u>How can COI contribute to periodic reviews of engagement processes, as per</u> <u>Indicator 2, Level AA?</u>

A facility should work with COI to determine the appropriate mechanisms for COI to contribute to a review of the engagement process and whether COI are interested in collaborating on the review. Examples of COI contribution to the review process could include collaboratively developing performance indicators and participating in the evaluation process.

9. <u>What are different ways that a facility could publicly report on engagement activities?</u>

Public reporting on engagement activities may be done in a variety of ways. For example, some companies will report on engagement as part of the annual corporate sustainability report. Others may report on COI engagement through newsletters, reports to the community or on the company website. Public reporting does not need to document every meeting with individual COI. However, public reporting should provide a broad summary of the facility's engagement activities and the key themes/topics that are of interest to its COI.

10. <u>What is the expectation in situations where an Indigenous community or other COI</u> are not interested in/willing to engage and/or collaborate with the facility?

The *TSM Indigenous and Community Relationships Protocol* focuses on ensuring that a facility's commitments, processes and actions are aligned with a genuine intent for building and maintaining meaningful relationships. Despite a facility's best efforts, there may be instances where an Indigenous community or other COI, for various reasons, do not engage with the facility. In these cases, the facility should be evaluated based on the alignment of its commitments, processes and actions to the criteria of this protocol. Lack of reciprocity on engagement efforts should not prevent a facility from scoring beyond Level A.

Furthermore, several criteria in the protocol require facilities and COI to collaborate. However, collaboration will not be possible or appropriate in all instances. For example, Indicator 2, Level AAA requires that the engagement processes be co-developed with COI. COI may not be interested or able to co-develop an engagement process. In these situations, a facility should be able to demonstrate that it has provided COI with the opportunity to co-develop the engagement processes and that engagement processes reflect the needs and interests of the community. Lack of reciprocity from COI to collaborate should not prevent a facility from achieving the corresponding performance level.

11. <u>How can a facility demonstrate that processes include consideration for COI</u> <u>identified as under-represented?</u>

The intent of the protocol is to ensure that facilities have inclusive and accessible engagement processes that provide opportunities for all COI, including individuals belonging to specific groups or populations that may be at heightened risk of vulnerability or marginalization, to engage in meaningful dialogue with the facility. To do so, the facility should encourage public participation in designing engagement processes to meet the needs of COI while respecting cultural needs and accommodating accessibility requirements. The intent of the protocol is to encourage companies to take a holistic approach to engagement. In some circumstances it may mean looking at issues that impact a broad spectrum of COI (e.g. health care, education and not-for-profit support). In other circumstances, it may mean one-on-one engagement with a specific group or individual. While not all COI will have an interest in engaging with a facility, the facility should be able to demonstrate that it facilitates opportunities for those potentially directly and adversely affected by the facility to participate in engagement processes, including ensuring that opportunities to engage with the facility are communicated publicly (e.g. through the company website, newspaper or community-distributed newsletters).





The facility should have provisions to protect COI confidentiality requests, including requests from under-represented groups.

12. <u>How can a facility without a formal agreement (e.g. IBA) demonstrate adherence to</u> <u>Indicator 3, Level AAA?</u>

Indicator 3, Level AAA requires a facility to be able to demonstrate that it is maintaining the terms of agreements and commitments with Indigenous communities and is tracking their implementation. The intent of this criterion is to confirm whether a facility is fulfilling commitments it has made to Indigenous communities. While formal agreements such as Impact Management Agreements, Participation Agreements, Impact Benefit Agreements, Socio-Economic Agreements, and Environmental Agreements may be used as evidence that this criterion is met, facilities can achieve Level AAA without a formal agreement in place.

13. <u>In order to meet the education and awareness criteria in Indicator 3 (Level A-AAA),</u> <u>does a facility have to provide the same level of training to all employees?</u>

Throughout Indicator 3, there are criteria that are intended to respond to the Truth and Reconciliation Commission's Call to Action 92 iii, which calls on the corporate sector in Canada to:

• Provide education for management and staff on the history of Aboriginal peoples, including the history and legacy of residential schools, the United Nations Declaration on the Rights of Indigenous Peoples, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.

Response to this Call to Action will vary across facilities and the degree of education and awareness provided will vary for different roles within an organization. For example, awareness and education provided to management and designated employees (as per level A) should be based on gaps in knowledge and/or skills and designed in a way to ensure that these individuals have the appropriate level of knowledge/skills to respectfully and effectively engage with the community. In contrast, awareness training provided to short-term employees could be included as part of a site orientation package.

Education and awareness on the history of Indigenous peoples should not be restricted to a conventional classroom environment. Some companies have successfully enhanced awareness within their organizations through providing access to Indigenous films and plays, embedding Indigenous protocols into business practices and encouraging employee participation in community events.

This protocol seeks to encourage facilities to ensure that employees have skills in intercultural competency, conflict resolution, human rights and anti-discrimination. In some cases, employees will come to their position with the relevant competencies. In other situations, the facility will need to provide skills-based training, intercultural awareness and engagement training. Initiatives should be based on the needs of the organization and individual employees. There will not be a one size fits all approach for the content or its delivery.

In order to achieve Level AA of Indicator 3, there must be evidence that awareness and/or training programs have been developed and implemented in collaboration with Indigenous communities. This could include collaboration on the content development and working with Indigenous communities to identify Knowledge Holders to deliver awareness and/or training programs. In some cases, collaboration with all (or any) relevant Indigenous communities will



not be possible. In these situations, the facility should be able to demonstrate that efforts have been made to engage with relevant communities. The facility should also be able to ensure that training material respectfully reflects the local context.

Level AAA encourages facilities to demonstrate leadership in enhancing awareness on the history, traditions and rights of Indigenous peoples, in addition to showing leadership on demonstrating intercultural awareness and engagement. One way to do so is through facility-wide education, awareness or training initiatives that are provided to employees on a regular basis. In assessing performance, there should be evidence that there are facility-wide initiatives that are designed to reach all employees on a regular basis. *TSM* Verification Service Providers are not required to assess whether there has been participation by all employees within the organization.

14. <u>How can competency in Indigenous engagement and regulatory consultation</u> <u>requirements be demonstrated?</u>

Considerations for determining whether an individual is competent include, but are not limited to:

- Previous training including, as appropriate, formal education
- Previous experience, including applying engagement protocols and consultation requirements
- Degree of relevant knowledge
- Relationship with the community

15. <u>What are examples of objectives that could be identified through collaboration with COI?</u>

Mutually agreed objectives may include, but are not limited to, local education, training, employment, business opportunities, procurement, economic development projects and environmental programs, mitigation measures and offsets.

16. <u>How can a facility that is not within proximity of an Indigenous community</u> <u>demonstrate adherence to the criteria in Indicator 3?</u>

The actions a facility undertakes to achieve Level A, AA and AAA of Indicator 3 will vary from one facility to the next. Engagement processes should reflect the local circumstances and the proximity of impact on Indigenous peoples. There may be facilities applying this protocol where there is no direct impact on an Indigenous community and/or there have been no requests for engagement from Indigenous communities. In other situations, companies may have attempted to engage with Indigenous communities, but have had little or no response from those communities. In situations where the degree and proximity of impact on an Indigenous community or communities is negligible, a facility may determine that some criteria in this indicator are not applicable. Regardless of proximity of impact, a facility assessed at Level AA or AAA should be able to demonstrate the following:

- It has a documented understanding of the proximate community, including the degree and proximity of impact on Indigenous community or communities.
- It has an open and inclusive engagement process to ensure that potentially impacted Indigenous communities have an opportunity to participate in the facility's engagement activities, if interested.
- Efforts are made to ensure that Indigenous peoples have equitable access to



opportunities with the company.

- Indigenous inclusion and awareness initiatives (as per Indicator 3) are in place.
- Efforts to engage with Indigenous communities and organizations are documented.

Facilities assessed at Level AA or AAA for Indicator 3 that have determined that criteria in Indicator 3 are not applicable are required to publicly describe how this determination was made and how they are applying this indicator in their annual *TSM* Company Profile as part of the *TSM* Progress Report.

17. <u>At what stage should a facility look at initiatives to benefit the community post-</u> <u>closure?</u>

Some companies applying this protocol will continue to be in operation for several decades. Discussions with the community about the sustainability of post-closure initiatives might not be pertinent in these circumstances. Priority initiatives should be determined through engagement with COI.

18. <u>How can a facility demonstrate that it has processes in place to identify potential</u> <u>and actual adverse social, environmental and community safety and health impacts?</u>

In order to engage effectively with relevant COI on potential and actual adverse impacts, a facility must have a good understanding of the potential and actual impacts associated with its activities. Identification of potential and actual impacts can be done in conjunction with other risk assessment exercises. For example, the facility may address this while fulfilling the *TSM Crisis Management and Communications Protocol*'s requirement to identify credible threats and risks.

A facility must also identify COI who have specific relevance to or interest in each identified potential impact. This process should be incorporated into the facility's system for COI identification as described in Indicator 1.

For example, in the case of tailings management, identified COI should include:

- Those who may be directly impacted in the event of a failure of a tailings facility.
- Those who may be impacted by the presence and operation of a tailings facility.

Issues of interest and importance will vary from one facility to the next and from one community to the next. Topics for engagement should be determined through dialogue with COI. In the case of tailings management, topics of interest and importance to COI could include:

- Emergency preparedness and response planning
- Nature of tailings (e.g. acid generating vs. non-acid generating)
- Environmental impacts
- Closure and reclamation
- Community safety and health
- Regulatory requirements and permitting processes
- Design plans for new facilities and expansions
- Water usage and quality
- Dust suppression
- Visual impact
- Liability and accountability
- Monitoring practices and results
- Traditional land use



• Adaptation to climate change and preparations for extreme weather events

19. How does the mitigation hierarchy apply to this protocol?

The mitigation hierarchy is a framework that is typically applied in managing the risks and potential impacts of development projects on biodiversity. However, the principles of the mitigation hierarchy should be applied to the management of other impacts. When developing action plans for adverse impacts, facilities should prioritize avoidance before moving to efforts to minimize or compensate for impacts. Avoidance includes measures taken to anticipate and prevent adverse impacts before actions or decisions are taken that could lead to such impacts. Avoidance may involve changes in early project planning to 'design out' impacts or risks. If avoidance is not possible, and once the preferred alternatives have been chosen, it is appropriate to consider minimization.

(Adapted from ICMM's <u>A cross-sector guide for implementing the Mitigation Hierarchy</u> <u>https://www.icmm.com/website/publications/pdfs/biodiversity/cross-sector-guide-mitigation-hierarchy</u>).

20. <u>What are the UN Sustainable Development Goals (SDGs) and how do they relate to</u> <u>Indicator 4 of this protocol?</u>

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

The 17 SDGs are integrated—that is, they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability (<u>https://www.undp.org/content/undp/en/home/sustainable-development-goals.html</u>).

Meeting the SDGs by 2030 will require cooperation and collaboration among governments, NGOs, development partners, communities and the private sector.

The SDGs can be useful tools to help facilities identity impacts and develop action plans for avoiding or minimizing adverse impacts and optimizing community benefits.

21. <u>What are examples of mechanisms that could be used to escalate complaints from</u> <u>COI if they are not adequately dealt with through the COI response mechanism?</u>

When resolution cannot be achieved through the response mechanism process, facilities and COI can retain a neutral and respected third party, such as an Elder, leader of a faithbased organization or trained mediator, to try to facilitate a mutually acceptable resolution. If the complaint involves a technical matter, a third party could be retained to provide expertise and an independent opinion.

Definition of Key Terms

22. What does "clear and understandable" mean?

Clear and understandable means that language in communications is at a reading level that is appropriate for the typical educational level of attainment of COIs and is free from technical jargon.

23. What is meant by "capacity building"?

Capacity building refers to the development, fostering and support of resources and relationships at individual, organizational, inter-organizational and systems levels, so that the COI can effectively engage with facilities and transfer information within the COI.



24. What are "engagement" and "dialogue"?

Engagement is a process of two-way communication that addresses the specific needs for information of COI and the facility in a way that is understandable to the participants in the discussion. Dialogue is a form of communication that leads to shared understanding between participants.

25. How is "senior management" defined?

For the purposes of this protocol, senior management refers to the corporate and/or facilitylevel personnel with overall accountability for engagement and dialogue processes. For large organizations with many sites, outreach takes place at several levels – community, regional and national. In these circumstances, senior management describes personnel with overall responsibility for outreach at each of the various levels.

26. What is baseline data?

Baseline data is the data typically collected prior to the mine development. For adverse social impacts, this would include data on social conditions, social well-being and social activities for COI. The scope of the baseline data should be tailored to the facility, take into account COI input, and should include indicators and information that are useful and meaningful for effective analysis of prioritized adverse social impacts. Recognizing that pre-development baseline data may not be available for all facilities, sites may choose to use alternative approaches. For example, a facility may select a point in time as the baseline to enable ongoing assessment of trends and effectiveness of actions. Furthermore, the facility may not have access to data on all prioritized adverse social impacts.

27. What is local and Indigenous knowledge?

United Nations Educational, Scientific, and Cultural Organization (UNESCO) has defined local and Indigenous knowledge as:

Local and Indigenous knowledge refers to the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings. For rural and Indigenous peoples, local knowledge informs decision-making about fundamental aspects of day-to-day life.

This knowledge is integral to a cultural complex that also encompasses language, systems of classification, resource use practices, social interactions, ritual and spirituality.

These unique ways of knowing are important facets of the world's cultural diversity, and provide a foundation for locally-appropriate sustainable development.

(UNESCO, Local and Indigenous Knowledge Systems: <u>http://www.unesco.org/new/en/natural-sciences/priority-areas/links/related-information/what-is-local-and-indigenous-knowledge)</u>

28. What is a community contribution?

A community contribution is anything done in an effort to benefit the community. Contributions include, but are not limited to, community donations, investments in community development initiatives, procurement and employment initiatives, support for skills training and education programs.





APPENDIX 2: TSM SELF ASSESSMENT CHECKLIST

Indigenous and Community Relationships Protocol

Facility Name:	Company Name:	
Assessed By:	Date Submitted:	

Supporting Documentation / Evidence:				
NAME OF DOCUMENT	LOCATION			

Interviewees:						
NAME	POSITION	NAME	POSITION			





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE	
INDICATOR 1: COI IDENTIFICATION							
	1.	Have some local COI been identified?					
ator 1 vel B	2.	Is there a process for identifying COI being developed?					
Indic Le	lf you ques the fa	i have answered "Yes" to all of the Level B qu tions. If you have not answered "Yes" to all of acility as a Level C.	lesti the	ons, Lev	, conti rel B q	inue to the Level A juestions, assess	
	3.	Is there a documented process in place for COI identification at the facility level that is able to determine a wide range of interests and concerns?					
	4.	Does the process also include:					
dicator 1 evel A		 A mechanism for COI to self-identify. Descriptions of relevant attributes for identified COI and a process in place to ensure related information is up-to- date. Provisions to protect confidentiality, where requested by a particular COI 					
<u> </u>	5.	Are COIs reconsidered periodically throughout the facility's life?					
	6.	Does the facility maintain a record of identified COI, which is regularly reviewed and updated?					
	If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.						
ndicator 1 Level AA	7.	 Does the documented process include the identification of: Under-represented COI within the local context. COI whose interest in the operation may be indirect and issues-based (e.g., provincial, national and international NGOs). 					
= -	8.	Are COIs invited to provide input into how the facility identifies COI?					
	lf you AAA asse	I have answered "Yes" to all of the Level AA q questions. If you have not answered "Yes" to ss the facility as a Level A.	ques all c	tion of the	s, cor e Leve	ntinue to the Level el AA questions,	





	QUESTION		Y	Ν	NA	DESCRIPTION & EVIDENCE	
Indicator 1 Level AAA	9.	Are periodic reviews of the COI identification system done in collaboration with COI to allow for continual improvement?					
	10.	Is COI input considered in updates to the COI identification process?					
	11.	Where COI input is not incorporated, has feedback been provided to the COI on why input was not incorporated?					
	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.						
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 1						Level:	

	QUESTION		Y	N	NA	DESCRIPTION & EVIDENCE	
INDICATOR 2: EFFECTIVE COI ENGAGEMENT AND DIALOGUE							
Indicator 2 Level B	12.	Does the facility provide assistance, where appropriate, to ensure COI are able to participate in engagement and dialogue processes?					
	13.	Does some internal reporting on COI engagement and dialogue activities take place?					
	14.	Are informal engagement processes in place, and does occasional dialogue occur with COI?					
	15.	Are formal COI engagement processes being developed, but have not been implemented?					
	If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.						
Indicator 2 Level A	16.	Are there documented COI engagement and dialogue processes, which were designed with input from COI, in place?					
	17.	Are communications written in the local language for COI (if requested) and written in language that is clear and understandable to COI?					





	QUESTION		Y	N	NA	DESCRIPTION & EVIDENCE		
	18.	Do processes exist to identify the needs of COI for capacity building to allow them to engage in effective participation on issues of interest or concern to them?						
	19.	Is engagement and dialogue training provided to designated personnel, including appropriate culturally-specific training?						
	20.	Does public reporting on COI engagement take place, including the types of engagement that have taken place in the reporting period and the topics/themes of the engagement?						
	If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.							
Indicator 2 Level AA	21.	Are engagement processes reviewed with COI to ensure they can effectively participate in identifying issues and opportunities and influence decisions that may interest or affect them?						
	22.	Does the facility have a consistent history of meaningful engagement with COI?						
	23.	Do processes include consideration for COI identified as under-represented?						
	24.	Do processes to build the capacity of COI to allow them to effectively participate in dialogue exist?						
	25.	Do COI contribute to periodic reviews of engagement processes to allow continual improvement?						
	26.	Is COI feedback on engagement and outcomes actively sought and publicly reported?						
	27.	Do opportunities exist for COI to provide feedback on public reporting?						
	If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA questions. If you have not answered "Yes" to all of the Level AA questions, assess the facility as a Level A.							




		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
	28.	Are engagement processes co-developed with COI, where possible, and do they include mechanisms for resolving disputes?				
	29.	Are COI engaged in joint decision making on agreed to matters that directly affect them and/or they have an interest in?				
Indicator 2 Level AAA	30.	Has a review of the effectiveness of the engagement system been conducted with COI and are identified corrective actions being implemented?				
	31.	Does public reporting include the disclosure of the effectiveness of the engagement system?				
	lf you a Lev asse	I have answered "Yes" to all of the Level AAA vel AAA. If you have not answered "Yes" to all ss the facility as a Level AA.	ns, as .evel A	ssess the facility as AAA questions,		
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 2						Level:

		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE			
INDICATOR 3: EFFECTIVE INDIGENOUS ENGAGEMENT AND DIALOGUE									
ator 3 el B	32.	Is a demonstrated commitment to Indigenous engagement evident?							
	33.	Are informal engagement processes in place, and does occasional dialogue occur with directly affected Indigenous communities?							
Indic	34.	Are processes being developed (or in place) to engage in dialogue with Indigenous communities to determine what is important to them and are these approaches being informed by local language(s), customs and laws?							





		Y	Ν	NA	EVIDENCE			
3	 Are processes being developed (or are in place) to ensure the competency of designated employees and/or to provide training in: Delegated consultation requirements. The history, traditions and rights of affected Indigenous peoples. Intercultural awareness and engagement. 							
lf qu th	If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.							
Indicator 3 Level A	 is there demonstrated senior management commitment to Indigenous engagement, consistent with the intent of the <i>TSM Mining and Indigenous Peoples Framework</i>, and does it include commitments to: Meaningful ongoing engagement. Building respectful relationships. Aiming to obtain the free, prior and informed consent (FPIC) of directly affected Indigenous peoples before proceeding with new projects or expansions where impacts to rights may occur. Ensuring that Indigenous peoples have equitable access to opportunities related to the facility. 							





	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
37.	Are processes established to engage with directly affected Indigenous communities that:				
	 Seek to understand what is important to the community, including culturally significant sites, how their rights and interests may be affected and how to mitigate adverse impacts on those rights and interests. Are informed by local language(s), traditions, customs, Indigenous governance and engagement processes where already established by affected Indigenous communities. Are designed to build meaningful relationships and respectful engagement towards achieving and maintaining broad ongoing support. Ensure that cultural, spiritual and/or Indigenous knowledge is sought from local Indigenous communities and organizations and is respectfully applied to inform decisions and practices, where appropriate. 				
38.	Does the facility work with directly affected Indigenous communities to identify opportunities for collaboration which could include, but are not limited to, local education, training, employment, business opportunities, revenue opportunities and economic development projects?				
39.	Does the facility aim to reach mutual agreement with directly affected Indigenous communities regarding culturally significant sites impacted by the facility, where they exist?				
40.	 Are processes in place and implemented to ensure the competency of designated employees and/or to provide training in: Delegated consultation requirements. The history, traditions and rights of affected Indigenous peoples. Intercultural awareness and engagement. 				





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE			
	If you have answered "Yes" to all of the Level A questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.								
	41.	Have engagement processes been, or are in the process of being, collaboratively developed with directly affected Indigenous communities (unless engagement protocols already established by the communities have been adopted by the facility)?							
	42.	 Do engagement processes include processes for: Determining how the facility and directly affected communities will seek agreement. Determining how traditional decision- making processes are incorporated, where they exist. Effectively resolving disputes. 							
dicator 3 evel AA	43.	Have mutually agreed upon objectives been established for identified opportunity areas in collaboration with directly affected Indigenous communities and are they in the process of being implemented?							
	44.	 Is education, awareness and/or training on the history, traditions and rights of Indigenous peoples, and intercultural awareness and engagement: Available to all employees. Provided to personnel beyond management and designated employees, with the intent of reaching all employees 							
	45.	 Is education and awareness content: Collaboratively designed and/or delivered with Indigenous communities. Regularly reviewed and updated through involvement with COI. 							
	lf you AAA asse	If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA questions. If you have not answered "Yes" to all of the Level AA questions, assess the facility as a Level A.							
Indicator 3	46.	Have engagement processes, as described in Level AA, been implemented and resulted in agreements or mutually agreed to commitments with directly affected Indigenous communities?							





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE	
	47.	Can the facility demonstrate that it is maintaining the terms of agreements and commitments and is tracking their implementation?					
	48.	Is the facility collaborating with communities on mutually identified objectives identified in Level AA and can it provide evidence of progress towards outcomes or benefits?					
	49.	 Is a collaborative assessment process in place to measure progress in meeting objectives and does it include: Verification of performance with COI. Incorporation of adaptive management that can address instances where objectives are not consistently met. 					
	50.	 Is a commitment to enhancing awareness on the history, traditions and rights of Indigenous peoples, and intercultural awareness and engagement demonstrated by at least three of the following: Facility-wide education, awareness and/or training on the history, traditions and rights of Indigenous peoples, and intercultural awareness is provided to employees on a regular basis. On site cultural activities are supported by the facility. The facility facilitates and encourages the participation of personnel in community events. The facility contributes to or participates in local, regional and/or national level awareness initiatives. Awareness and education efforts are regularly assessed for effectiveness. Awareness and education efforts are expanded beyond the facility. Traditional and cultural activities/protocols are integrated into business practices. 					
	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.						
AS	SESSI	SESSED LEVEL OF PERFORMANCE FOR INDICATOR 3					





		QUESTION		N	NA	DESCRIPTION & EVIDENCE				
		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE				
INDICA	TOR	4: COMMUNITY IMPACT AND BENEFIT MA	NA	GEN	IENT					
	51.	Is there demonstrated senior management commitment to identify and mitigate potential and actual adverse impacts related to the facility's activities that directly affect COI and work to optimize benefits to those communities?								
	52.	Have roles and responsibilities for implementing commitment been assigned?								
Indicator 4 Level B	53.	Have actual and potential adverse impacts related to the facility's activities that directly affect COI been identified by the facility?								
	54.	Can the facility demonstrate some efforts to mitigate identified adverse impacts?								
	55.	Are decisions related to contributions to the community managed informally?								
	56.	Does the facility do some monitoring of adverse impacts, trends and management practices.								
	lf you ques the fa	If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.								
	57.	Are processes in place to engage with COI on the identification, prioritization and avoidance or mitigation of potential and actual adverse impacts related to the facility's activities that directly affect COI?								
Indicator 4 Level A	58.	 In prioritizing potential and actual adverse impacts, do processes consider the relevancy of the following on COI: Social adverse impacts that may be attributed to the presence of the facility. Environmental adverse impacts that may directly affect communities including those associated with tailings management (as applicable). Adverse impacts related to community safety and health. 								





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
	59.	Do engagement processes include measures to facilitate and encourage the participation of under-represented COI and to determine which COI are most significantly impacted by identified potential and actual adverse impacts?				
	60.	Have action plans for prioritized impacts been informed through engagement with relevant COI and are they being implemented?				
	61.	Do action plans include the identification of relevant objectives or targets and are these tracked, reviewed and adaptively managed with affected COI?				
	62.	Do action plans include consideration for how actions aimed at mitigating impacts can also result in optimized benefits for COI?				
	63.	Are processes in place to engage with relevant COI on the identification and prioritization of opportunities to optimize benefits for COI, which could include, but is not limited to, consideration of local procurement and employment?				
	64.	Have action plans for prioritized opportunities to optimize benefits been developed through engagement with relevant COI and are they being implemented?				
	65.	Do action plans include the identification of relevant objectives or targets and are these tracked, reviewed and adaptively managed with affected COI?				
	66.	Are processes in place to engage with relevant COI on contributions made by the facility to community development initiatives?				
	67.	Are contributions communicated publicly?				





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE				
	68.	Is baseline data collected for prioritized adverse impacts?								
	69.	Are metrics established to track action plan implementation and effectiveness?								
	70.	Are results reviewed with affected COI on a regular and pre-determined basis?								
	lf you ques the fa	If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.								
	71.	Are processes in place to avoid or mitigate prioritized adverse impacts that incorporate collaborative decision making with relevant COI?								
	72.	 Do the identification and prioritization of opportunities to optimize benefits for COI consider opportunities that: Benefit a broad spectrum of the community. Can be self-sustaining beyond the productive life of the facility. 								
ator 4 el AA	73.	Are processes in place to optimize benefits for COI that incorporate collaborative decision making with relevant COI?								
Indic Leve	74.	Are decisions on how to direct contributions made by the facility to the community made collaboratively with COI?								
	75.	In collaboration with COI (where possible), does the facility regularly measure and analyze the trends of identified prioritized adverse impacts? Does the facility also regularly measure and analyze opportunities to optimize benefits and work with COI to prioritize and adaptively manage how gaps are addressed?								
	lf you AAA asse	I have answered "Yes" to all of the Level AA q questions. If you have not answered "Yes" to ss the facility as a Level A.	ues all c	tion of the	s, con e Leve	tinue to the Level el AA questions,				





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE	
	76.	Where such processes do not already exist, is the facility working with COI to implement decision-making processes to empower COI to manage ongoing adverse impact mitigation and benefit optimization after the productive life of the facility ends?					
Indicator 4 Level AAA		 Do these processes include the identification of potential partnerships and the role of relevant levels of government to ensure the mitigation and optimization can be sustained? Where opportunities to minimize long term adverse impacts and/or optimize benefits beyond the productive life of the facility have been identified, are they being incorporated into long-term investment decisions and/or closure plans to ensure they can be sustained in the long-term? 					
	77.	Where COI do not already have a shared vision and community development plan (or equivalent) and where COI is interested, does the facility provide support to enable COI to begin planning?					
	78.	 Does the facility collaborate with affected COI on reviewing the effectiveness of: Actions aimed at optimizing priority opportunities for community benefits. Actions aimed at mitigating adverse impacts. 					
	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.						
AS	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 4						





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE			
INDICATOR 5: COI RESPONSE MECHANISM									
	79.	Does an informal feedback process exist?							
ator 5 /el B	80.	Is a formal feedback system either planned or in development?							
Indio	lf you ques the fa	I have answered "Yes" to all of the Level B qu tions. If you have not answered "Yes" to all of acility as a Level C.	estio the	ons, Lev	conti el B q	nue to the Level A uestions, assess			
	81.	 Is there a response mechanism in place with a clear process to receive, manage and respond to COI grievances, comments and requests, which: Captures reported incidents, concerns and feedback. 							
ator 5 el A		 Assesses and determines which are grievances that require remedy. Responds in a timely manner. Is accessible. 							
Indica	82.	Does the facility have a process to track issues and concerns raised by COI, including their status, and does it communicate status updates?							
	83.	Are COI proactively and clearly informed on how to access the facility's response mechanism?							
	If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.								
- 5	84.	Is the response mechanism collaboratively developed with directly affected COI?							
Indicator Level A4	85.	Is the response mechanism reviewed at least annually to identify opportunities for continuous improvement?							
	lf you AAA asse	If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA questions. If you have not answered "Yes" to all of the Level AA questions, assess the facility as a Level A.							





		QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE		
	86.	Are there mechanisms in place to escalate complaints if not adequately dealt with by the COI response mechanism?						
cator 5 el AAA	87.	Does the response mechanism include post-process follow-up with mechanism users?						
Indi Lev	88.	Has a review of the effectiveness of the response mechanism been conducted and are identified corrective actions being implemented?						
	lf you a Lev asse	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.						
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 5					5	Level:		



For more information about the TSM initiative, visit:

The Mining Association of Canada <u>www.mining.ca/tsm</u>

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