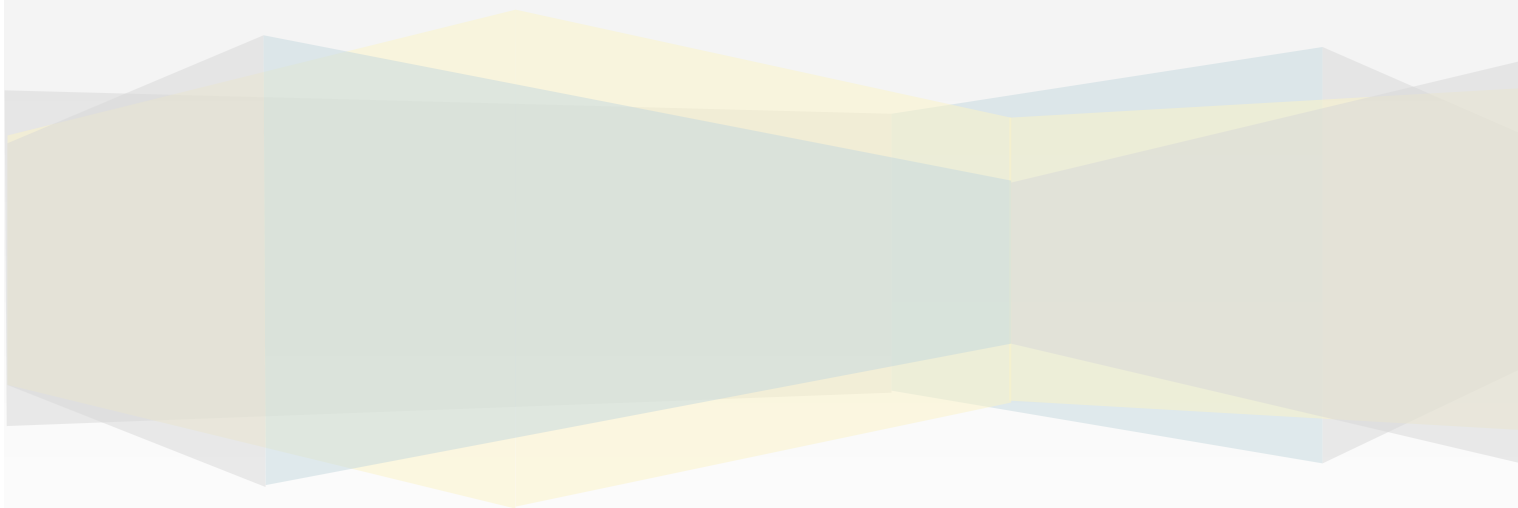


Towards Sustainable Mining

Tailings Management Protocol





TSM ASSESSMENT PROTOCOL

A Tool for Assessing Tailings Management Performance

Purpose

The purpose of the assessment protocol is to provide guidance to companies in completing their evaluation of tailings management performance against [Towards Sustainable Mining® \(TSM®\)](#) indicators. The assessment protocol sets out the general expectations for tailings management as part of the *TSM* initiative.

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 tailings management. This assessment Protocol provides an indicator of the level of implementation of proactive tailings management practices as part of the *TSM* initiative. It is not, of itself, a guarantee of the effectiveness of tailings management activities.

Performance Indicators

Five performance indicators have been established:

1. Tailings management policy and commitment
2. Tailings management system
3. Assigned accountability and responsibility for tailings management
4. Annual tailings management review
5. Operation, maintenance and surveillance (OMS) manual

While this Protocol focuses on the management of tailings facilities and internal accountability and review mechanisms, an additional critical component of good practice in tailings management is community engagement. *TSM* addresses tailings related community engagement as part of a broader topic on engagement regarding risks to communities and as such, tailings engagement requirements are contained in the [TSM Aboriginal and Community Outreach Protocol](#). Specifically, Indicator 2 of the *TSM Aboriginal and Community Outreach Protocol* requires companies to have processes in place to engage with communities of interest (COI) on credible risks to the public that are associated with company activities, including tailings management. Specific topics for engagement should be determined through dialogue with COI.

Action Plans

Companies that have not achieved a minimum of a Level A for the tailings management Indicators are required to disclose in their company profile section of the annual *TSM Progress Report* actions that the company intends to take to achieve a Level A.





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Tailings management action plans should address at a minimum:

- identified gaps in Indicators where the tailings facility has not achieved a Level A;
- specific actions the company will take to reach a Level A; and
- timeline for implementing actions (note: actions must be implemented within three years).





INDICATOR 1: TAILINGS MANAGEMENT POLICY AND COMMITMENT

Purpose

To confirm that companies have established and effectively communicated a policy and commitment that expresses intention, commitments and principles in relation to tailings management.

Tailings Management Policy and Commitment: Assessment Criteria

LEVEL	CRITERIA
C	<p>No tailings management policy and/or commitments have been developed.</p> <p>Policy and/or commitments are assumed to be covered by overall site management policies, but these do not specifically address tailings management.</p> <p>Action plan to meet the requirements of Level A has been developed.</p>
B	<p>Tailings management policy and/or commitments are in place, but not in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i>.</p> <p>Action plan to meet the requirements of Level A has been developed.</p>
A	<p>Policy and/or commitments are:</p> <ul style="list-style-type: none">• in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i>; and• approved by senior management and endorsed at governance level. <p>There is a process in place to ensure that:</p> <ul style="list-style-type: none">• the policy and/or commitments are communicated to employees;• employees and contractors whose roles, either directly or indirectly, may affect the safety of tailings facilities understand the policy to a degree appropriate to their relevant level and function; and• policy and/or commitments are implemented with budget allocation. <p>Internal audit is conducted to determine whether the tailings management policy and commitments, and their implementation, meet the requirements listed above.</p>
AA	<p>External audit is conducted to determine whether the tailings management policy and commitments, and their implementation, meet the requirements of Level A.</p>
AAA	<p>The external audit, as outlined in Level AA, also involves an evaluation of the effectiveness of the policy, commitments and their implementation.</p>





Tailings Management Policy and Commitment: *Frequently Asked Questions*

#	FAQ	PAGE
1	Does a "tailings policy" have to be a stand-alone document?	13
2	Can corporate documentation be used to demonstrate commitment?	13
3	Can a company effectively implement a tailings management system without having a tailings management policy in place?	13
4	Indicator 1 seeks to confirm that there is a process in place to ensure that employees and contractors with direct or indirect responsibilities for the safety of tailings facilities understand the policy. What are some examples of positions with direct and indirect responsibilities for the safety of tailings facilities?	13
7	What does "audit" mean?	14
8	What does "evaluation of effectiveness" mean?	14
9	What is meant by the governance level of the company?	15
10	What does it mean to be in conformance with the <i>Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?	15





INDICATOR 2: TAILINGS MANAGEMENT SYSTEM

Purpose

To confirm that companies have a tailings management system in conformance with the tailings management framework in MAC's *A Guide to the Management of Tailings Facilities* aimed at providing a systematic structure for the assessment of risks, setting of performance objectives, implementation of activities to achieve performance objectives, assignment of responsibilities, and assurance processes to ensure that tailings facilities are managed safely and effectively.

Tailings Management System: Assessment Criteria

LEVEL	CRITERIA
C	No tailings management system has been developed, documented or implemented. Action plan to meet the requirements of Level A has been developed.
B	A tailings management system: <ul style="list-style-type: none">• is implemented but it is not in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>; or• a gap analysis has been conducted, comparing existing tailings management practices against MAC's <i>A Guide to the Management of Tailings Facilities</i>. Development is underway of a tailings management system to be in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> . Action plan to meet the requirements of Level A has been developed.
A	Tailings management system is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> , and has been implemented. It includes relevant requirements related to all life phases of the tailings facilities: planning, design, construction, operation, closure, and post-closure. Internal audit is conducted to determine whether the tailings management system meets the requirements listed above.
AA	External audit is conducted to determine whether the tailings management system meets the requirements listed in Level A.
AAA	External audit as outlined in Level AA also involves an evaluation of the effectiveness of the tailings management system, and its implementation.





TAILINGS MANAGEMENT PROTOCOL

Tailings Management System: *Frequently Asked Questions*

#	FAQ	PAGE
3	Can a company effectively implement a tailings management system without having a tailings management policy and/or commitments in place?	13
7	What does "audit" mean?	14
8	What does "evaluation of effectiveness" mean?	14
10	What does it mean to be in conformance with the <i>Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?	15
12	Does a tailings management system need stand-alone documentation?	16





INDICATOR 3: ASSIGNED ACCOUNTABILITY AND RESPONSIBILITY FOR TAILINGS MANAGEMENT

Purpose

To confirm that accountability is assigned to an executive officer (CEO or COO), and that an appropriate management structure and resources are in place to provide assurance to the corporation that tailings are managed responsibly.

Assigned Accountability and Responsibility for Tailings Management: Assessment Criteria

LEVEL	CRITERIA
C	Accountability and responsibility for tailings-related issues and performance are defined, but not documented. Action plan to meet the requirements of Level A has been developed.
B	Documented assignment of accountability to an executive officer is in place and responsibility for tailings management has been delegated. Action plan to meet the requirements of Level A has been developed.
A	Documented assignment of accountability to an executive officer. Responsibility, budgetary authority and accountability for implementation of, and reporting on, the tailings management system is delegated in writing to qualified personnel, and is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> . Internal audit is conducted to determine whether there is documented assignment of accountability to an executive officer, and whether delegated responsibility meets the requirements listed above.
AA	External audit is conducted to determine whether there is documented assignment of accountability to an executive officer, and whether delegated responsibility meets the requirements of Level A.
AAA	The external audit as outlined in Level AA also involves an evaluation of the effectiveness of the assignments and/or delegations of accountability, responsibility and budget authority.





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Assigned Accountability and Responsibility for Tailings Management:
Frequently Asked Questions

#	FAQ	PAGE
5	How can a company demonstrate whether personnel are “qualified”?	13
6	What are examples of actions that should be the responsibility of the Accountable Executive Officer to demonstrate accountability for tailings management?	14
7	What does "audit" mean?	14
8	What does “evaluation of effectiveness” mean?	14
10	What does it mean to be in conformance with the <i>Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?	15





INDICATOR 4: ANNUAL TAILINGS MANAGEMENT REVIEW

Purpose

To confirm that there is an annual review of tailings management that is reported to the Accountable Executive Officer to ensure corporate governance over tailings facilities and to ensure that the company is satisfied that the tailings management organizational structures and systems are effective and continue to meet the needs of the organization.

Annual Tailings Management Review: Assessment Criteria

LEVEL	CRITERIA
C	<p>No annual review of tailings management is reported to the Accountable Executive Officer. Periodic, un-documented reviews of the tailings management system and performance are conducted at the tailings facility-level, but are not in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>.</p> <p>Action plan to meet the requirements of Level A has been developed.</p>
B	<p>No annual review of tailings management is reported to the Accountable Executive Officer. Periodic, documented reviews of the tailings management system and performance conducted at the tailings facility-level are in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>.</p> <p>Action plan to meet the requirements of Level A has been developed.</p>
A	<p>Documented annual review of tailings management is reported to the Accountable Executive Officer. The review is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> and ensures that:</p> <ul style="list-style-type: none">• deficiencies are identified and there are plans for corrective action with timelines; and• progress towards completing corrective actions is tracked and reported at least annually to the Accountable Executive Officer. <p>Internal audit is conducted to determine whether the annual tailings management review meets the requirements listed above. Results of the internal audit(s) are reported to the Accountable Executive Officer.</p>
AA	<p>External audit is conducted to determine whether the annual tailings management review meets the requirements listed above. Results of the external audit(s) are reported to the Accountable Executive Officer.</p>
AAA	<p>The external audit in Level AA also involves an evaluation of the effectiveness of the annual tailings management reviews. Results of the evaluation of effectiveness are reported to the Accountable Executive Officer.</p>





Annual Tailings Management Review: Frequently Asked Questions

#	FAQ	PAGE
7	What does "audit" mean?	14
8	What does "evaluation of effectiveness" mean?	14
10	What does it mean to be in conformance with the <i>Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?	15





INDICATOR 5: OMS MANUAL

Purpose

To confirm that the company has developed and implemented a tailings OMS manual in conformance with MAC's *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities*, to serve as a key component in implementing the tailings management system (Indicator 2), and to provide a reference point to facilitate continuity of knowledge regarding the tailings facility and its related requirements over time.

OMS Manual: Assessment Criteria

LEVEL	CRITERIA
C	<p>No OMS manual has been developed.</p> <p>Action plan to meet the requirements of Level A has been developed.</p>
B	<p>An OMS manual:</p> <ul style="list-style-type: none"> has been developed, but it is not in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i>; or, is under development, to be in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i>. <p>Roles and responsibilities for tailings facility personnel are defined and documented.</p> <p>Action plan to meet the requirements of Level A has been developed.</p>
A	<p>An OMS manual has been developed and implemented that is in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i>.</p> <p>Emergency preparedness and response plans have been developed and tested that are in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i>.</p> <p>Internal audit is conducted to determine whether the OMS manual meets the requirements listed above.</p>
AA	<p>External audit is conducted to determine whether the OMS manual meets the requirements listed in Level A.</p>
AAA	<p>External audit as outlined in Level AA also involves an evaluation of the effectiveness of the OMS manual and the emergency preparedness and response plans.</p>





TAILINGS MANAGEMENT PROTOCOL

OMS Manual: Frequently Asked Questions

#	FAQ	PAGE
7	What does "audit" mean?	14
10	What does it mean to be in conformance with the <i>Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?	15





APPENDIX 1: FREQUENTLY ASKED QUESTIONS

Protocol-Specific Guidance

1. Does a "tailings policy" have to be a stand-alone document?

No. MAC's *A Guide to the Management of Tailings Facilities* states (Section 2.1) that the requirement for a specific tailings policy can be met within an overarching company operations or environmental policy if that policy contains specific reference to tailings management, which includes the policies and commitments as outlined in the Guide.

2. Can corporate documentation be used to demonstrate commitment?

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

3. Can a company effectively implement a tailings management system without having a tailings management policy and/or commitments in place?

No. There is a direct linkage between Indicators 1 and 2 of this Protocol. A company must have a tailings management policy and/or commitments in place in order to effectively implement a tailings management system, since the policy provides direction and is part of the management system. A company cannot achieve a Level A for Indicator 2 (Tailings Management System) if it has not achieved a Level A or higher for Indicator 1 (Tailings Management Policy).

4. Indicator 1 seeks to confirm that there is a process in place to ensure that employees and contractors with direct or indirect responsibilities for the safety of tailings facilities understand the policy. What are some examples of positions with direct and indirect responsibilities for the safety of tailings facilities?

Examples of those with direct responsibility for the safety of tailings facilities would include mill managers, tailings pipeline inspectors, and employees undertaking geotechnical surveillance and environmental monitoring activities. An example of a position with indirect responsibilities for the safety of tailings facilities include supply chain personnel as they may order critical control parts, pipes, etc. for the tailings facilities, but do not work directly on tailings.

5. How can a company demonstrate whether personnel are "qualified"?

Considerations for determining whether a person is qualified include, but are not limited to:

- previous training experience
- previous experience in performing the task/activity
- knowledge and specific safety and tailings-related training
- formal education and training
- regulatory or industry-driven definitions of "qualified"





6. What are examples of actions that should be the responsibility of the Accountable Executive Officer to demonstrate accountability for tailings management?

Examples of actions the Accountable Executive Officer can take to demonstrate accountability for tailings management could include:

- ensuring that the senior management team and/or Board or governance level are appropriately informed on tailings management issues;
- reviewing risk assessment results;
- participating in tailings reviews;
- reviewing and approving adequate resources for tailings management;
- participating in independent tailings review meetings; and
- participating in crisis management planning simulation exercises.

7. What does "audit" mean?

Audit of tailings facility management is undertaken to demonstrate conformance with MAC's *A Guide to the Management of Tailings Facilities*. It is conducted by an individual or team which, although perhaps employed by the company, is in a position to be independent, impartial and objective with regard to the evaluated tailings facility.

This should not be confused with the verification system as described in the *TSM Assessment Protocol*, which is largely a desk-top exercise in which the *TSM* rating self-assigned by a company against a given Indicator is verified. The *TSM* verification is not equivalent to an audit or evaluation of effectiveness of tailings facility management as outlined in the preceding paragraph.

MAC's *A Guide to the Management of Tailings Facilities* defines audit as follows:

Audits (both internal and external): the formal, systematic and documented examination of a tailings facility's conformance with explicit, agreed, prescribed criteria, often requirements stipulated in law or regulation or, in the company's tailings management system. Audits evaluate and report on the degree of conformance with stipulated criteria, based on the systematic collection and documentation of relevant evidence. Audits involve some degree of judgment but are not designed to determine root cause of deficiencies, or to evaluate management system effectiveness.

External audits are conducted by auditors who are external to the company being audited. Auditors maintain an objective viewpoint throughout the audit process to ensure that findings and conclusions are based only on the evidence. (Adapted from ISO 19011).

8. What does "evaluation of effectiveness" mean?

An evaluation of effectiveness goes beyond determining whether a condition has been met, and includes an assessment of whether the tailings management system (or components thereof) is achieving the intended results. It considers both the extent to which planned activities have been realized, and the extent to which desired results, outcomes, and targets have been achieved.





Criteria to be examined will depend on the scope of the evaluation. Typical sources of information that should be considered when evaluating tailings management system effectiveness include:

- changes in external conditions that could affect the tailings management system and achievement of established objectives; and
- changes in internal conditions that could affect the tailings management system and achievement of established objectives.

Performance results and trends that should be evaluated to determine the effectiveness of the tailings management system and its implementation include:

- the extent to which performance objectives and indicators have been achieved;
- the extent to which planned activities have been implemented as intended;
- fulfilment of conformance obligations;
- non-conformities and corrective actions based on inspection and audit results;
- monitoring and measurement results;
- adequacy of resources to support achievement of objectives;
- feedback from practitioners and end users; and
- any additional relevant information or feedback from COI.

9. What is meant by the governance level of the company?

For the purposes of the *Tailings Management Protocol*, the company board of directors (or a sub-committee of the Board of Directors) is considered the governance level of a company. For companies headquartered outside of Canada that do not have a Canadian Board of Directors, the governance level would be equivalent to the highest-level committee or board within Canada that provides oversight and review of tailings management activities. Endorsement of the tailings management policy and/or commitments at the governance level will vary from company to company. For example, a board resolution adopting the policy will be appropriate for some companies, while others will fulfill this requirement through a presentation on the tailings management policy to a sub-committee of the board of directors.

10. What does it mean to be in conformance with the Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities?

For Indicators 1-4, companies must be able to demonstrate conformance with the *Guide to the Management of Tailings Facilities* (Tailings Guide) to achieve Level A performance. The Table of Conformance provided in Appendix 3 defines which aspects of the Tailings Guide must be implemented to achieve Level A for each Indicator.

For Indicator 5, companies must be able to demonstrate conformance with *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities* (OMS Guide) to achieve Level A performance.

Upon completion of the review of the OMS Guide, the Table of Conformance provided in Appendix 3 will be updated to also define which aspects of the OMS Guide must be implemented to achieve Level A for Indicator 5.





A company would be deemed not conforming with the Guides when there is:

- an absence of a complete program area (e.g. risk assessment, training processes, independent review); or
- a chronic deficiency of a single program area or a control that directly affects safety, environment, or quality (e.g. routine exceedance of performance criteria for critical controls, monitoring requirements frequently missed).

Non-conformances that represent an administrative issue or a non-repetitive finding that does not directly affect safety, environment or quality (e.g. minor gap in training records, irregularity in scheduled inspection records, etc.) should not prevent a company from achieving a Level A for a tailings facility for the relevant indicator.

Professional judgment must be applied in assessing the significance of identified non-conformances.

11. How long are audits valid?

Internal and external audits remain valid up to a maximum of three years.

12. Does a tailings management system need stand-alone documentation?

No. Reference to a ‘tailings management system’ does not imply the need for separate documentation exclusively for a stand-alone management system for tailings. A tailings management system will likely prove most effective and resilient if incorporated into broader site management systems, but it is ultimately up to each company to decide how best to organize and integrate the relevant tailings-related information.

Definitions of Key Terms

13. What is a “management system”?

A “management system” represents processes and procedures that collectively provide a systematic framework for ensuring that tasks are performed correctly, consistently and effectively to achieve a specified outcome and to drive continual improvement in performance. A systems approach to management requires an assessment of what needs to be done, planning to achieve the objective, implementation of the plan, and review of performance in meeting the set objective. A management system also considers necessary personnel, resources and documentation requirements. Other definitions associated with management systems are:

Policy: The expression of management’s commitment to a particular issue area that presents the stance of the company to interested external parties.

Practice: Documented approaches to carrying out a task.

Procedure: A documented description of how a task is to be carried out.

14. What does “accountability” mean?

The tailings management system must identify the party who is ultimately answerable for tailings management performance, and the development and implementation of the tailings management system for the tailings facility. This accountability cannot be delegated. Resources are available to the accountable party to ensure proper systems (training,





equipment, communications, etc.) are in place to effectively meet their tailings management goals.

Overall accountability for tailings management must be assigned to an executive officer representing the company. For companies headquartered in Canada, the executive officer is the CEO or COO. For companies headquartered outside of Canada, accountability for tailings management should be assigned to the most senior executive in Canada.

15. What does "responsibility" mean?

Within the tailings management system, specific tailings management-related requirements and tasks are identified and assigned to qualified personnel. It is important that responsibilities are clearly communicated so that each position understands what is expected of them.

16. What does "company" mean?

MAC's *A Guide to the Management of Tailings Facilities* uses the term "Owner" rather than "company." The definition of "company" for the purpose of this Protocol is the same as "Owner" as defined in the Tailings Guide: **Owner** is 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 or ore processing facility from which tailings and water are generated is the Owner of those tailings and can be considered the Owner of the tailings facility.

17. What does "Accountable Executive Officer" mean?

The Board of Directors or Governance Level designates an Accountable Executive Officer for tailings management. This Officer:

- needs to be aware of key outcomes of tailings facility risk assessments and how these risks are being managed;
- has accountability and responsibility for putting in place an appropriate management structure;
- assigns responsibility and appropriate budgetary authority for tailings management and defines the personnel duties, responsibilities and reporting relationships, supported by job descriptions and organizational charts, to implement the tailings management system through all phases in the tailings facility life cycle; and
- provides assurance to the company and its COI that tailings facilities are managed responsibly.





APPENDIX 2: TSM SELF-ASSESSMENT CHECKLIST

Tailings Management

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

Supporting Documentation / Evidence:	
NAME OF DOCUMENT	LOCATION

Interviewees:			
NAME	POSITION	NAME	POSITION





TAILINGS MANAGEMENT PROTOCOL

	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
INDICATOR 1: TAILINGS MANAGEMENT POLICY AND COMMITMENT					
INDICATOR 1 LEVEL B	Is a tailings management policy and commitment in place, or is one being developed in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Has an action plan to meet the requirements of Level A been developed?				
	<i>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 tailings facility as a Level C.</i>				
INDICATOR 1 LEVEL A	Is a tailings management policy and/or commitment in place that is in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Is the policy and/or commitments approved by senior management and endorsed at the governance level?				
	Is the policy and/or commitments communicated to employees?				
	Do employees and contractors whose roles, either directly or indirectly, may affect the safety of tailings facilities understand the policy to a degree appropriate to their relevant level and function?				
	Is the policy and commitment implemented with budget allocation?				
	Has an internal audit been conducted to determine whether the tailings management policy and commitments, and their implementation, meet the requirements listed above?				
	<i>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 tailings facility as a Level B.</i>				





TAILINGS MANAGEMENT PROTOCOL

INDICATOR 1 LEVEL AA	Has an external audit been conducted to determine whether the tailings management policy and commitments, and their implementation, meet the requirements of Level A?				
	<i>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 tailings facility as a Level A.</i>				
INDICATOR 1 LEVEL AAA	Did the external audit as outlined in Level AA also involve an evaluation of the effectiveness of the policy, commitments and their implementation?				
	<i>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 tailings facility as a Level AA.</i>				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 1			Level: _____	





TAILINGS MANAGEMENT PROTOCOL

	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
INDICATOR 2: TAILINGS MANAGEMENT SYSTEM					
INDICATOR 2 LEVEL B	Has a tailings management system been implemented, or has a gap analysis of existing management practices against the MAC tailings management framework been prepared?				
	Is development underway of a tailings management system that is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Has an action plan to meet the requirements of Level A been developed?				
	<i>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 tailings facility as a Level C.</i>				
INDICATOR 2 LEVEL A	Is the tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> , and implemented?				
	Does the tailings management system include relevant requirements related to all life phases of the tailings facilities: planning, design, construction, operation, closure, and post-closure?				
	Has an internal audit been conducted to determine whether the tailings management system meets the requirements listed in Level A?				
	<i>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 tailings facility as a Level B.</i>				
<i>NOTE: A tailings management policy is an inherent component of the tailings management system, and a tailings facility cannot achieve Level A on Indicator #2 without achieving Level A or higher on Indicator #1.</i>					





TAILINGS MANAGEMENT PROTOCOL

INDICATOR 2 LEVEL AA	Has an external audit been conducted to determine whether the tailings management system meets the requirements listed in Level A?				
	<i>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 tailings facility as a Level A.</i>				
INDICATOR 2 LEVEL AAA	Did the external audit as outlined in Level AA also involve an evaluation of the effectiveness of the tailings management system, and its implementation?				
	<i>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 tailings facility as a Level AA.</i>				
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 2				Level: _____	





TAILINGS MANAGEMENT PROTOCOL

	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
INDICATOR 3: ASSIGNED ACCOUNTABILITY AND RESPONSIBILITY FOR TAILINGS MANAGEMENT					
INDICATOR 3 LEVEL B	Has accountability for tailings management been assigned to an executive officer?				
	Has responsibility for tailings-related issues and performance been delegated?				
	Has an action plan to meet the requirements of Level A been developed?				
	<i>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 tailings facility as a Level C.</i>				
INDICATOR 3 LEVEL A	Has responsibility, budgetary authority and accountability for implementation of, and reporting on, the tailings management system been delegated in writing to qualified operations and/or corporate personnel, and is it in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Has an internal audit been conducted to determine whether there is documented assignment of accountability to an executive officer and delegated responsibility that meets the requirements listed above?				
	<i>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 tailings facility as a Level B.</i>				
INDICATOR 3 LEVEL AA	Has an external audit been conducted to determine whether there is documented assignment of accountability to an executive officer and delegated responsibility that meets the requirements of Level A?				
	<i>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 tailings facility as a Level A.</i>				





TAILINGS MANAGEMENT PROTOCOL

INDICATOR 3 LEVEL AAA	Did the external audit as outlined in Level AA also involve an evaluation of the effectiveness of the assignments and/or delegations of accountability, responsibility and budget authority?				
	<i>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 tailings facility as a Level AA.</i>				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 3			Level: _____	





TAILINGS MANAGEMENT PROTOCOL

	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
INDICATOR 4: ANNUAL TAILINGS MANAGEMENT REVIEW					
INDICATOR 4 LEVEL B	Are there periodic reviews of the tailings management system and performance at the tailings facility-level in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Has an action plan to meet the requirements of Level A been developed?				
	<i>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 tailings facility as a Level C.</i>				
INDICATOR 4 LEVEL A	Are the results of the annual review of tailings management documented and reported to the Accountable Executive Officer?				
	Is the review in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Does the review ensure that: <ul style="list-style-type: none"> • Deficiencies are identified and there are plans for corrective action with timelines, and • Progress towards completing corrective actions is tracked and reported to the Accountable Executive Officer? 				
	Has an internal audit been conducted to determine whether the annual tailings management review meets the requirements listed above?				
	<i>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 tailings facility as a Level B.</i>				





TAILINGS MANAGEMENT PROTOCOL

INDICATOR 4 LEVEL AA	Has an external audit been conducted to determine whether the annual tailings management review meets the requirements listed above?				
	<i>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 tailings facility as a Level A.</i>				
INDICATOR 4 LEVEL AAA	Did the external audit as outlined in Level AA also involve an evaluation of the effectiveness of the annual tailings management reviews?				
	<i>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 tailings facility as a Level AA.</i>				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 4			Level: _____	





TAILINGS MANAGEMENT PROTOCOL

	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
INDICATOR 5: OMS MANUAL					
INDICATOR 5 LEVEL B	Has an OMS manual been developed, or is an OMS manual, in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> , being prepared?				
	Have roles and responsibilities for tailings facility personnel been defined and documented?				
	Has an action plan to meet the requirements of Level A been developed?				
	<i>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 tailings facility as a Level C.</i>				
INDICATOR 5 LEVEL A	Has an OMS manual been developed and implemented in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?				
	Have emergency preparedness and response plans been developed and tested that are in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?				
	Has an internal audit been conducted to determine whether the OMS Manual meets the requirements listed above?				
	<i>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 tailings facility as a Level B.</i>				
INDICATOR 5 LEVEL AA	Has an external audit been conducted to determine whether the OMS Manual meets the requirements listed in Level A?				
	<i>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 tailings facility as a Level A.</i>				





TAILINGS MANAGEMENT PROTOCOL

	QUESTION	Y	N	NA	DESCRIPTION & EVIDENCE
INDICATOR 5 LEVEL AAA	Did the external audit as outlined in Level AA also involve an evaluation of the effectiveness of the OMS Manual and the emergency preparedness and response plans?				
	<i>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 tailings facility as a Level AA.</i>				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 5			Level: _____	





For more information about the *TSM* initiative, visit:

The Mining Association of Canada

www.mining.ca/tsm

Mining Association of British Columbia

www.mining.bc.ca/tsm

Quebec Mining Association

www.amq-inc.com

Finnish Mining Association

www.kaivosvastuu.fi/in-english

The Argentinean Chamber of Mining Entrepreneurs (CAEM)

www.caem.com.ar/hms/

Botswana Chamber of Mines

www.bcm.org.bw

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