

TSM ASSESSMENT PROTOCOL

A Tool for Assessing Tailings Management Performance

Introduction

Launched in 2004, Towards Sustainable Mining (TSM) is an initiative of The Mining Association of Canada designed to enhance the industry's reputation by improving its performance. MAC members subscribe to TSM guiding principles, a set of commitments that addresses all areas of our industry's performance.

These guiding principles are backed by specific performance indicators, which member companies began reporting against in 2004. These indicators are designed to identify the industry's current performance in key areas, and point to actions that could be taken to improve. Areas for which performance indicators have been developed include tailings management, energy use and greenhouse gas emissions management, Aboriginal and community outreach, crisis management planning, safety and health, and biodiversity conservation management.

This document provides a tool to assist companies in the assessment of the standard of tailings management currently being implemented by their sites, in conformance with the TSM tailings management performance indicators. It enables key performance indicators to be segregated, and performance improvements for each indicator tracked year to year. The use of this protocol also enhances the consistency of assessments conducted across companies. In addition, this tool has been designed to enable external verification of company performance, consistent with the TSM verification system and the initiative's commitment to transparency and accountability.

Assessing Tailings Management Implementation

Tailings management has been an area of significant focus by The Mining Association of Canada, first through a Board Task Force and subsequently through the Tailings Working Group. This focus has led to the preparation and publication of: *A Guide to the Management of Tailings Facilities; Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities;* and *A Guide to Audit and Assessment of Tailings Facility Management*. This effort reflects recognition by The Mining Association of Canada of the risk posed by tailings facilities, and the importance of ensuring their environmentally responsible management.

What is a tailings facility?

MAC's A Guide to the Management of Tailings Facilities defines a tailings facility "includes the collective structures, components and equipment pertaining to tailings impoundment and management, including dams and reservoirs, other related facilities and appurtenances"

The purpose of the assessment protocol is to provide guidance to the member companies in completing their evaluation of tailings management against TSM indicators. The assessment protocol sets out the general expectations of MAC for tailings management by its member companies in support of the TSM initiative. Assessment should also:

- Assist member companies to develop capacity to monitor and improve performance; and
- Provide a basis for company assurance.

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 some knowledge of and experience in the practice of tailings management. This assessment protocol provides an indicator of the level of implementation of tailings management systems in support of the TSM initiative and 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

A base assumption is made that all MAC members are in compliance with all legal and regulatory requirements.

Five levels of performance are identified for each indicator. Criteria further define performance at each level, as illustrated below.

Tailings Management Performance Assessment Criteria	
Level	Criteria
C	No systems in place; activities tend to be reactive; procedures may exist but they are not integrated into policies and management systems
B	Procedures exist but they are not fully consistent or documented; systems/ processes planned and being developed
A	Systems/processes, in conformance with the tailings management framework as presented in MAC's <i>A Guide to the Management of Tailings Facilities</i> are developed and implemented
AA	Systems/processes have been formally verified through internal, independent audit or assessment
AAA	Excellence and leadership is demonstrated through validation by external, independent audit or assessment

Specific criteria for each performance indicator are provided in subsequent tables to enable the assessor to determine an appropriate level of performance (Levels C-AAA).

When conducting the assessment, assessors should note that the five indicators complement one another. As such, performance improvements in one indicator may depend and/or coincide with performance improvements in another. For example, a facility cannot achieve a Level A for *Tailings management system* if it has not achieved a Level A or higher for *Tailings management policy*.

The assessor is required to select the level that most clearly represents the status of the operation. Only one level can be selected for each indicator, and it can be chosen only if all criteria for that level and all preceding levels have been met.

Where a performance element or indicator is not relevant, then an assessment of N/A should be assigned.

The goal of each MAC member is to achieve, at a minimum, a consistent “A” ranking on the TSM Tailings Management assessment and, having achieved this, to work towards demonstration of these best practices through internal and/or external audit or assessment (levels “AA” and “AAA”).

Facility-level Assessments

Respondents are expected to provide facility-level assessments for each specified indicator.

By “facility-level assessments”, it is intended that companies will complete an assessment and report on tailings management for each distinct operating unit, or facility, of the company. It is recognized that companies may categorize their facilities in different ways.

Facility-level reporting has been found to be the most reliable, informative and useful approach for performance evaluation. The TSM on-line performance reporting database has been designed to facilitate assessment on a facility by facility basis.

Assessment Process

It is recommended that the assessment be completed using a process of interview, discussion and document review, including representative site management, operations and environmental personnel. A level of expertise in auditing and systems assessment and some knowledge of and experience in the technical aspects of mining and tailings management is required.

Only one level can be selected for each indicator, and it can be chosen only if all criteria for that level and all preceding levels have been met. No partial levels of performance (e.g. B+) can be reported. Where a performance element or indicator is not relevant, then an assessment of N/A should be assigned.

Reporting is encouraged for each distinct operating unit of the company. For clarity, if more than one tailings facility falls within the company’s distinct operating unit, results can be consolidated into a TSM facility-level assessment.

Policies, programs and resources are often provided or reinforced at the corporate level that guide or complement facility-level activities. An assessment of facility-level tailings management performance will need to take this into account.

Where an operation is shared between two parties, e.g. a joint venture, the two parties are encouraged to discuss amongst themselves who should complete the assessment, whether it should be undertaken jointly or divided so that the results reflect the appropriate activities of each company.

Structure of the Assessment Protocol

For each indicator, the protocol provides:

- A statement of purpose that expresses the spirit and intent of the indicator
- Assessment criteria for each level of performance
- Supporting guidelines to help the assessor to understand the general scope of each indicator and to act as a framework for reviewing documentation and conducting interviews necessary for the assessment of the company's (or facility's) performance
- Frequently Asked Questions (FAQs) that provide further information, such as definitions for key terms and answers to common questions that arise.

1. TAILINGS MANAGEMENT POLICY AND COMMITMENT

Purpose:

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

Tailings Management Policy and Commitment <u>ASSESSMENT CRITERIA</u>	
Level	Criteria
C	No formal tailings management policy and commitment developed. Policy and commitment assumed to be covered by overall site management policies, but these do not specifically address tailings management.
B	Tailings management policy and commitment in place, but not in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> ; or in preparation, to be in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> .
A	Effective implementation: Policy and commitment in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> , developed and/or reviewed in consultation with COI, endorsed by senior management, and implemented with budget allocation.
AA*	Internal audit or assessment: Formal internal, independent audit or assessment that the tailings management policy and commitment is in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> .
AAA*	External audit or assessment: Formal external, independent audit or assessment that the tailings management policy and commitment is in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> .

*Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

Tailings Management Policy and Commitment

FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
1	Does a "tailings policy" have to be a stand-alone document?	See page 15
2	Can corporate documentation be used to demonstrate commitment?	See page 15
3	What does COI consultation mean?	See page 15
5	What does "audit or assessment" mean?	See page 16
6	Can a company or facility achieve a Level AAA on satisfactory completion of an external audit or assessment, without having completed a Level AA internal audit or assessment?	See page 16
7	What if a company or facility receives an audit or assessment that indicates non-conformance with the Assessment Criteria?	See page 17
8	What is a Community of Interest (COI)?	See page 17
9	What does "formal" mean?	See page 17
10	What does "effective" mean?	See page 18
12	What does "independent" mean?	See page 18
13	What does "accountability" mean?	See page 18
14	What does "responsibility" mean?	See page 18

Tailings Management Policy and Commitment

SUPPORTING GUIDELINES

Through interview and review of documentation, determine:

- That the company has established and maintains a policy and commitment respecting tailings management in conformance with MAC's "*A Guide to the Management of Tailings Facilities*".
- That the policy and commitment accurately reflects the existing commitments and views of senior management regarding expected tailings management performance.
- That there has been consultation with COI in developing and/or reviewing the policy and commitment.
- That the policy and commitment has been implemented, as demonstrated by allocation of budget and resources. Managers and employees appear to be familiar with the policy and commitment and understand its basic intent.
- How management and employee awareness of the policy and commitment is maintained over time, and the specific means employed.
- That the policy and commitment establishes an ongoing program of review and continual improvement.
- What audit or assessment processes are in place to ensure that the policy and commitment is in conformance with MAC's "*A Guide to the Management of Tailings Facilities*".
- Whether an internal or external audit or assessment of the tailings management policy and commitment has been carried out within the last three years.

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* to provide a formal systematic structure for the assessment of risks, setting of goals and objectives, consultation with COI, implementing activities to achieve goals, assignment of responsibilities, and assurance processes to ensure that tailings facilities are managed effectively.

Tailings Management System	
<u>ASSESSMENT CRITERIA</u>	
Level	Criteria
C	No formal tailings management system developed or implemented.
B	Tailings management system implemented but not in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ; or Gap analysis of existing management practices against the MAC tailings management framework prepared. Development of a tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> underway.
A	Effective implementation: Tailings management system, in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> , developed and/or reviewed in consultation with COI, and implemented.
AA*	Internal audit or assessment: Formal internal, independent audit or assessment that the implementation of the tailings management system is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> .
AAA*	External audit or assessment: Formal external, independent audit or assessment that the implementation of the tailings management system is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> .

* Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

Tailings Management System FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
3	What does COI consultation mean?	See page 15
4	Can a facility effectively implement a tailings management system without having a tailings management policy in place?	See page 16
5	What does "audit or assessment" mean?	See page 16
6	Can a company or facility achieve a Level AAA on satisfactory completion of an external audit or assessment, without having completed a Level AA internal audit or assessment?	See page 16
7	What if a company or facility receives an audit or assessment that indicates non-conformance with the Assessment Criteria?	See page 17
8	What is a Community of Interest (COI)?	See page 17
9	What does "formal" mean?	See page 17
10	What does "effective" mean?	See page 18
11	What is a "system"?	See page 18
12	What does "independent" mean?	See page 18

Tailings Management System SUPPORTING GUIDELINES

Through interview and review of documentation, determine:

- That a tailings management system is in place that is in conformance with the tailings management framework in MAC's *"A Guide to the Management of Tailings Facilities"*.
- That there has been consultation with COI in the development and/or review of the tailings management system.
- That the tailings management system is reviewed annually to ensure it remains current and effective, and if the reviews are reported to senior management.
- What audit or assessment processes are in place to ensure that the tailings management system is in conformance with the tailings management framework in MAC's *"A Guide to the Management of Tailings Facilities"*.
- Whether an internal or external audit or assessment of the tailings management system has been carried out within the last three years.

3. ASSIGNED ACCOUNTABILITY AND RESPONSIBILITY FOR TAILINGS MANAGEMENT

Purpose:

Executive accountability for tailings management is necessary to signal the importance of tailings facilities to our business and the adverse impacts improper tailings management practices have on the environment and our reputation. This indicator confirms that companies have an executive officer (CEO or COO) who has overall accountability to ensure that an appropriate management structure is in place to provide assurance to the corporation and its COIs that tailings are managed responsibly. It is expected that the executive officer will delegate responsibility for tailings management, budgetary issues and other tailings-related functions to operations and/or corporate personnel, while retaining ultimate accountability for the management of tailings and its outcomes.

Assigned Accountability and Responsibility for Tailings Management ASSESSMENT CRITERIA	
Level	Criteria
C	No formal assignment of accountability to an executive officer. No formal delegation of responsibility for tailings-related issues and performance.
B	Formal assignment of accountability to an executive officer. No formal delegation of responsibility for tailings-related issues and performance.
A	Effective implementation: Accountability formally assigned to an executive officer. Responsibility, budgetary authority and accountability for implementation of, and reporting on, the tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> formally delegated to operations and/or corporate personnel.
AA*	Internal audit or assessment: Formal internal, independent audit or assessment: <ul style="list-style-type: none"> ■ of the assignment of accountability to an executive officer; and ■ that the responsibility, budget authority and accountability for the tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> are formally delegated to operations and/or corporate personnel.

* Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

Assigned Accountability and Responsibility for Tailings Management
ASSESSMENT CRITERIA continued

AAA*	<p>External audit or assessment: Formal external, independent audit or assessment:</p> <ul style="list-style-type: none"> ■ of the assignment of accountability to an executive officer; and ■ that the responsibility, budget authority and accountability for the tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> has been formally delegated to operations and/or corporate personnel.
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Assigned Accountability and Responsibility for Tailings Management
FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
5	What does "audit or assessment" mean?	See page 16
6	Can a company or facility achieve a Level AAA on satisfactory completion of an external audit or assessment, without having completed a Level AA internal audit or assessment?	See page 16
7	What if a company or facility receives an audit or assessment that indicates non-conformance with the Assessment Criteria?	See page 17
9	What does "formal" mean?	See page 17
10	What does "effective" mean?	See page 18
12	What does "independent" mean?	See page 18

Assigned Accountability and Responsibility for Tailings Management
SUPPORTING GUIDELINES

Through interview and review of documentation, determine:

- That an executive officer has been assigned specific accountability for tailings management.
- That the accountable executive officer has formally delegated responsibility for tailings management, budgetary issues and other tailings-related functions to operations and/or corporate personnel.
- What audit or assessment processes are in place to ensure that the tailings management accountability and responsibilities have been assigned in conformance with the tailings management framework in MAC's *"A Guide to the Management of Tailings Facilities"*.
- Whether an internal or external audit or assessment of the assigned accountability and responsibility for tailings management has been carried out within the last three years.

* Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

4. ANNUAL TAILINGS MANAGEMENT REVIEW

Purpose:

To confirm there is an annual corporate review of tailings management that is reported to the accountable executive officer to ensure that the corporation is satisfied that the tailings management structure and systems are effective and continue to meet the needs of the organization.

Annual Tailings Management Review <u>ASSESSMENT CRITERIA</u>	
Level	Criteria
C	No formal, annual corporate review of tailings management reported to the accountable executive officer. Periodic, informal reviews of the tailings management system and performance at the facility level, but not in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> .
B	No formal, annual corporate review of tailings management reported to the accountable executive officer. Periodic formal reviews of the tailings management system and performance at the facility level in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> .
A	Effective implementation: formal annual corporate review of tailings management 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> .
AA*	Internal audit or assessment: Formal internal, independent audit or assessment: <ul style="list-style-type: none"> ■ that the annual corporate review of tailings management is reported to the accountable executive officer; and ■ that the review is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>.
AAA*	External audit or assessment: Formal external, independent audit or assessment: <ul style="list-style-type: none"> ■ that the annual corporate review of tailings management is reported to the accountable executive officer; and ■ that the review is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>.

* Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

Annual Tailings Management Review

FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
5	What does "audit or assessment" mean?	See page 16
6	Can a company or facility achieve a Level AAA on satisfactory completion of an external audit or assessment, without having completed a Level AA internal audit or assessment?	See page 16
7	What if a company or facility receives an audit or assessment that indicates non-conformance with the Assessment Criteria?	See page 17
9	What does "formal" mean?	See page 17
10	What does "effective" mean?	See page 18
12	What does "independent" mean?	See page 18

Annual Tailings Management Review

SUPPORTING GUIDELINES

Through interview and review of documentation, determine:

- That the company performs an annual corporate review of tailings management.
- That the results of the review are reported to the accountable executive officer.
- That the process employed for the annual corporate review of tailings management addresses requirements of the tailings management framework in MAC's *A Guide to the Management of Tailings Facilities*.
- That the annual corporate review of tailings management reported to the accountable executive officer has been subject to internal or external audit or assessment within the last three years.

5. OMS MANUAL

Purpose:

To confirm that the facility has developed and implemented a tailings OMS manual in conformance with *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities*.

OMS Manual ASSESSMENT CRITERIA	
Level	Criteria
C	No OMS manual developed.
B	OMS manual developed, but not in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ; or OMS manual, in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> , in preparation; and Roles and responsibilities for facility personnel defined and documented.
A	Effective implementation: OMS manual developed and implemented in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> . Emergency preparedness and response plans documented.*
AA†	Internal audit or assessment: Formal internal, independent audit or assessment that the development and implementation of the OMS manual are in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> . Results of verification are reported to the annual corporate review of tailings management. Emergency preparedness and response plans tested.
AAA‡	External audit or assessment: Formal external, independent audit or assessment that the development and implementation of the OMS Manual are in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> . Results of the external verification are reported to the annual corporate review of tailings management.

* Emergency preparedness and response plans are integral to OMS manuals and to the safety and security of tailings facilities and surrounding communities. Please consult MAC's *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities* for more information on the development and testing of emergency preparedness and response plans.

† Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

‡ Audit or assessment results remain valid for up to a maximum of three (3) years, providing the company makes a statement, signed by the executive officer accountable for tailings management, supported by annual management reviews, that the tailings management performance indicator implementation has been maintained or improved in the intervening period.

OMS Manual

FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
5	What does "audit or assessment" mean?	See page 16
6	Can a company or facility achieve a Level AAA on satisfactory completion of an external audit or assessment, without having completed a Level AA internal audit or assessment?	See page 16
7	What if a company or facility receives an audit or assessment that indicates non-conformance with the Assessment Criteria?	See page 17
10	What does "effective" mean?	See page 18
12	What does "independent" mean?	See page 18

OMS Manual

SUPPORTING GUIDELINES

Through interview and review of documentation, determine:

- That an OMS manual has been prepared and implemented for tailings facilities.
- That the OMS manual is in conformance with the MAC guide *Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities*.
- That the roles and responsibilities of facility personnel are defined.
- That the facility has audit or assessment processes in place to ensure that the requirements of its OMS manual are being followed, that action plans are executed to address any deficiencies, and that the OMS manual implementation is reported to the annual corporate review of tailings management.
- Whether an internal or external audit or assessment of the OMS manual's conformance with MAC's *Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities* has been carried out within the last three years.
- That emergency preparedness and response plans are prepared, documented, and tested.

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 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 facility-level practices. If this linkage is established, then the corporate documentation can be accepted as evidence of corporate and/or facility-level commitment.

3. What does COI consultation mean?

Consultation is a process by which a company communicates with communities of interest to understand their viewpoint(s), to inform them of company activities and performance, and to actively engage them in discussion and participation on issues of concern.

Consultation on the development of a company's tailings management policy and statement of commitments (Indicator 1) and tailings management system (Indicator 2) are explicit elements of MAC's *A Guide to the Management of Tailings Facilities*. To meet consultation criteria in Indicators 1 and 2, companies should undertake efforts to consult with relevant COI as stated in the *Guide*. To achieve the Level A commitment on these two indicators, companies should be able to demonstrate that efforts were undertaken to identify and consult with COI at the local and site level, at a minimum.

Companies are encouraged to refer to the TSM Assessment Protocol for Aboriginal and Community Outreach Performance, which includes four performance indicators and guidance addressing:

- COI identification process
- COI engagement and dialogue processes
- COI response mechanisms
- Reporting performance.

The Aboriginal and Community Outreach Protocol outlines a process for identifying and consulting with COI beginning with those having local and site interest, extending up to corporate and more general, issues-based interest. To achieve Level A for the first indicator, COI Identification Process, companies must demonstrate that they have a formal and documented system in place for identification of COI at the local or site level.

4. Can a facility effectively implement a tailings management system without having a tailings management policy in place?

No. There is a direct linkage between Indicators 1 and 2 of this protocol. A facility must have a tailings management policy in place in order to effectively implement a tailings management system, since the policy provides direction and is part of the management system. A facility 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).

AUDIT OR ASSESSMENT

5. What does "audit or assessment" mean?

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

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

MAC's *A Guide to Audit and Assessment of Tailings Facility Management* defines audit and assessment as follows:

Audit is the formal, systematic and documented examination of an organization's or facility's conformance with explicit, agreed, prescribed criteria, often requirements stipulated in law or regulation or, in the case of this Guide, the MAC tailings management framework. Audits seek to evaluate and report on conformance or non-conformance with stipulated criteria based on the systematic collection and documentation of competent evidence. Audits are not based on opinion, nor are they designed to determine root cause of deficiencies, or to evaluate management system effectiveness.

Assessment goes beyond measuring against stipulated criteria (audit), to incorporate professional judgment in an evaluation of the effectiveness, implementation, application and maintenance of a management system. Assessment is driven by a concern for quality of system design and management process implementation. It can identify system deficiencies and determine their root cause(s) to provide a basis for process improvement.

6. Can a company or facility achieve a Level AAA on satisfactory completion of an external audit or assessment, without having completed a Level AA internal audit or assessment?

Yes, because the TSM Performance Indicator assessment is a snapshot in time of a company's or facility's status as relates to each specific performance indicator. Assigning a rating of Level AA or AAA is based on whether an audit or assessment is internal or external. *A company or facility does not need to do an internal audit or assessment (qualifying for a rating of Level AA) before receiving a rating of Level AAA for an external audit or assessment.*

7. What if a company or facility receives an audit or assessment that indicates non-conformance with the Assessment Criteria?

If the audit or assessment identifies a significant non-conformance, a rating of Level B should be assigned. Some examples of significant non-conformance might include lack of or inadequate:

- documentation of key aspects;
- COI consultation;
- guiding policy and commitment;
- assignment of accountability and responsibility for tailings management;
- annual corporate review of tailings management.

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

DEFINITION OF KEY TERMS

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

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

- employees
- Aboriginal or indigenous peoples
- mining community members
- suppliers
- neighbours
- customers
- contractors
- environmental organizations and other non-governmental organizations
- governments
- the financial community, and
- shareholders.

Companies are encouraged to refer to the TSM Assessment Protocol for Aboriginal and Community Outreach Performance, which includes performance indicators addressing the identification of COI.

9. What does "formal" mean?

The term "formal" is used frequently in the assessment, and usually in conjunction with 'system' or "process". Formalized systems, processes or activities are usually given status through clear and precise requirements, documented as a written procedure. This means that the business can clearly and easily demonstrate that the process or system is in place. It would also typically require documented processes or an "audit trail".

10. What does "effective" mean?

Where the term "effective" is used, it requires the element to be fully operational in order that desired outcomes can be achieved.

11. What is a "system"?

A system, or "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 systems are:

- **Policy:** The formal expression of management's commitment to a particular issue area that presents the stance of the company to interested external parties.
- **Practice:** Informal, undocumented approaches to carrying out a task.
- **Procedure:** A formalized, documented description of how a task is to be carried out.

12. What does "independent" mean?

Audit or assessment conducted by verifiers who are external to the activity being audited or assessed and who are free from bias and conflict of interest. **External audit or assessment** must be conducted by verifiers who are also external to the company being audited or assessed. Verifiers maintain an objective state of mind throughout the verification process to ensure that findings and conclusions are based only on the evidence. (Adapted from ISO 19011)

13. What does "accountability" mean?

Accountability: 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 at the 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.

14. What does "responsibility" mean?

Responsibility: Within the tailings management system, specific tailings management related requirements and tasks are identified and assigned to specific positions within the facility. It is important that responsibilities are clearly communicated so that each position understands what is expected of them.

APPENDIX 2: SELF-ASSESSMENT CHECKLIST

Tailings Management

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: 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> ?				
	<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 A questions, assess the facility as a Level C.</i>				
Indicator 1 Level A	Is a tailings management policy and commitment in place that is in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Was the policy and commitment developed and/or reviewed in consultation with COI?				
	Is the policy and commitment endorsed by senior management?				
	Is the policy and commitment implemented with budget allocation?				
	<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 facility as a Level B.</i>				
Indicator 1 Level AA	Has a formal <u>internal</u> , independent audit or assessment been conducted to confirm that the tailings management policy and commitment is in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	<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 facility as a Level A.</i>				
Indicator 1 Level AAA	Has a formal <u>external</u> , independent audit or assessment been conducted to confirm that the tailings management policy and commitment is in conformance with MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	<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 facility as a Level AA.</i>				
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 1					Level: _____

	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> ?				
	<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 facility as a Level C.</i>				
Indicator 2 Level A	Is a tailings management system in place that is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	Was the tailings management system developed and/or reviewed in consultation with COI?				
	Is the tailings management system being implemented?				
	<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 facility as a Level B.</i>				
<i>NOTE: A tailings management policy is an inherent component of the tailings management system, and a facility cannot achieve Level A on Indicator #2 without achieving Level A or higher on Indicator #1.</i>					
Indicator 2 Level AA	Has a formal <u>internal</u> , independent audit or assessment been conducted to confirm that the implementation of the tailings management system is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	<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 facility as a Level A.</i>				
Indicator 2 Level AAA	Has a formal <u>external</u> , independent audit or assessment been conducted to confirm that the implementation of the tailings management system is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	<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 facility as a Level AA.</i>				
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 2					Level: _____

	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 formally assigned to an executive officer?				
	<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 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 in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> been formally delegated to operations and/or corporate personnel?				
	<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 facility as a Level B.</i>				
Indicator 3 Level AA	Has a formal <u>internal</u> , independent audit or assessment been conducted to confirm:				
	<ul style="list-style-type: none"> ■ assignment of accountability to an executive officer; and 				
	<ul style="list-style-type: none"> ■ formal delegation of the responsibility, budget authority and accountability for the tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> to operations and/or corporate personnel. 				
<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 facility as a Level A.</i>					
Indicator 3 Level AAA	Has a formal <u>external</u> , independent audit or assessment been conducted to confirm:				
	<ul style="list-style-type: none"> ■ assignment of accountability to an executive officer; and 				
	<ul style="list-style-type: none"> ■ formal delegation of the responsibility, budget authority and accountability for the tailings management system in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> to operations and/or corporate personnel. 				
<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 facility as a Level AA.</i>					
ASSESSED LEVEL OF PERFORMANC FOR INDICATOR 3					Level: _____

	Question	Y	N	NA	Description & Evidence
INDICATOR 4: ANNUAL TAILINGS MANAGEMENT REVIEW					
Indicator 4 Level B	Are there periodic formal reviews of the tailings management system and performance at the facility level in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i> ?				
	<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 facility as a Level C.</i>				
Indicator 4 Level A	Are the results of the formal annual corporate review of tailings management reported to the accountable executive officer?				
	<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 facility as a Level B.</i>				
Indicator 4 Level AA	Has a formal <u>internal</u> , independent audit or assessment been conducted to confirm that:				
	<ul style="list-style-type: none"> ■ the annual corporate review of tailings management is reported to the accountable executive officer; and 				
	<ul style="list-style-type: none"> ■ the review is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>. 				
<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 facility as a Level A.</i>					
Indicator 4 Level AAA	Has a formal <u>external</u> , independent audit or assessment been conducted to confirm that:				
	<ul style="list-style-type: none"> ■ the annual corporate review of tailings management is reported to the accountable executive officer; and 				
	<ul style="list-style-type: none"> ■ the review is in conformance with the tailings management framework in MAC's <i>A Guide to the Management of Tailings Facilities</i>. 				
<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 facility as a Level AA.</i>					
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 4					Level: _____

	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 facility personnel been defined and documented?				
	<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 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> .				
	Are emergency preparedness and response plans documented?				
	<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 facility as a Level B.</i>				
Indicator 5 Level AA	Has a formal <u>internal</u> , independent audit or assessment been conducted to confirm that the development and implementation of the OMS manual are in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?				
	Are the results reported to the annual corporate review of tailings management?				
	Are emergency preparedness and response plans tested?				
	<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 facility as a Level A.</i>				
Indicator 5 Level AAA	Has a formal <u>external</u> , independent audit or assessment been conducted to confirm that the development and implementation of the OMS manual are in conformance with MAC's <i>Developing an Operating, Maintenance and Surveillance Manual for Tailings and Water Management Facilities</i> ?				
	Are the results reported to the annual corporate review of tailings management?				
	<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 facility as a Level AA.</i>				
ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 5		Level: _____			