TSM ASSESSMENT PROTOCOL

A Tool for Assessing Safety and Health 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 member companies subscribe to the TSM guiding principles, a set of commitments that address 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 assessing the current program of safety and health management being implemented by their facilities, in accordance with the TSM Framework on Safety and Health. This protocol identifies a set of indicators to be assessed annually, and against which performance improvements can be 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.

Many jurisdictions, including Canadian provinces and territories, have well-developed legislative and regulatory regimes related to occupational health and safety. The indicators in this assessment protocol go beyond existing regulatory requirements, with an emphasis on establishing robust safety and health management systems to establish safe and healthy workplaces and drive performance improvement.

Assessing Safety and Health Implementation

The purpose of the assessment protocol is to provide guidance to the member companies in completing their evaluation of safety and health management against TSM indicators. The assessment protocol sets out the general expectations of MAC for Safety and Health 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 knowledge of and experience in the practice of Safety and Health, including relevant regulatory regimes and requirements. Joint health and safety committee members should be consulted. This assessment protocol provides an indicator of the level of implementation of Safety and Health in support of the TSM initiative and is not, of itself, a guarantee of the effectiveness of Safety and Health activities.

Performance Indicators

Five performance indicators have been established.

1. Policy, Commitment and Accountability
2. Planning, Implementation and Operation
3. Training, Behaviour and Culture
4. Monitoring and Reporting
5. Performance

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

Safety and Health 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	Actions are not fully consistent or documented; systems/processes planned and being developed
A	Systems/processes are developed and implemented
AA	Integration into management decisions and business functions
AAA	Excellence and leadership

Criteria for each performance indicator are provided in subsequent tables, which 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.

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.

The goal of each MAC member is to achieve, at a minimum, a consistent "A" ranking on the TSM Safety and Health assessment and to work towards continuous improvement.

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 safety and health management and performance 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 safety and health personnel. A level of expertise in auditing and systems assessment and knowledge of and experience in safety and health 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.

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 Protocols

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 facility's (or company's) performance, and
- Frequently Asked Questions (FAQs) that provide further information, such as definitions for key terms and answers to common questions that arise.

1.   POLICY, COMMITMENT AND ACCOUNTABILITY

Purpose:

To confirm the facility has established clear accountability for safety and health management and performance, and that safety and health policy commitments have been established and clearly communicated to employees, contractors and suppliers.

<table>
<tr><td colspan="2">Policy, Commitment and Accountability
<u>ASSESSMENT CRITERIA</u></td></tr>
<tr><td>Level</td><td>Criteria</td></tr>
<tr><td>C</td><td>No formal safety and health policy and commitment developed and communicated, or accountabilities for safety and health management are not formally defined and assigned at the senior levels of the organization. The safety and health professional may be seen to be accountable for safety and health at this facility.</td></tr>
<tr><td>B</td><td>Formal safety and health policy is in place and has been communicated to staff. Policy may not be consistent with the intent of the MAC Safety and Health Framework.

Accountability for Safety and Health has been assigned to a senior management representative at the facility and is generally understood as everyone's responsibility. However, specific responsibilities may not be clearly defined in role descriptions.</td></tr>
<tr><td>A</td><td>Policy commitments are defined and authorized by the company's senior management and are consistent with the intent of the MAC Safety and Health Framework.

The Policy requirements have been communicated to staff, and to contractors and suppliers who work at the facility.

Accountabilities and responsibilities are documented and understood at all levels.</td></tr>
<tr><td>AA</td><td>Internal audit or assessment has confirmed the policy is consistent with the intent of the MAC Safety and Health Framework, accountabilities and responsibilities are documented and understood, and the policy requirements have been communicated to staff, contractors and suppliers at the facility.</td></tr>
<tr><td>AAA</td><td>External audit or assessment has confirmed the policy is consistent with the intent of the MAC Safety and Health Framework, accountabilities and responsibilities are documented and understood, and the policy requirements have been communicated to staff, contractors and suppliers at the facility.</td></tr>
</table>

Policy, Commitment and Accountability
<u>**FREQUENTLY ASKED QUESTIONS**</u>

Policy, Commitment and Accountability
<u>**SUPPORTING GUIDELINES**</u>

Through interview and review of documentation, determine that:

- Board and executive level commitment and accountability are formal and documented
- There is a company-wide, clearly communicated safety and health policy.
- Managers and employees appear to be familiar with the policy and commitment and understand its basic intent.
- Management and employee awareness of the policy and commitment are maintained over time, and the specific means employed.
- The policy and commitment establish an ongoing program of review and continual improvement.
- Audit or assessment processes are in place to ensure that the policy and commitment is in conformance with the intent of the MAC TSM Safety and Health Framework.
- An internal or external audit or assessment of the policy and commitment has been carried out within the last three years.

2. PLANNING, IMPLEMENTATION AND OPERATION

Purpose:

To confirm that processes have been established to effectively plan for and manage safety and health to prevent the occurrence of all incidents, acknowledging safety and health is a shared responsibility, and that hazard identification, risk assessment and workplace inspections are integral to an effective system.

Planning, Implementation and Operation ASSESSMENT CRITERIA	
Level	**Criteria**
C	No formal management systems are in place. Safety and health risks tend to be controlled reactively.
B	Safety and health management systems are developed, but are not fully implemented. Risk control tools are available, but are not consistently used. Safety standards and procedures are in place, but there is no process for ensuring they are appropriate (facility risk-based) and updated regularly.
A	Formal and documented safety and health management system is fully implemented. At a minimum, it incorporates: • Documented objectives and targets, with supporting plans to achieve them • Formal hazard identification, risk assessment and control processes • Documented safety standards and procedures • Defined and documented roles and responsibilities for safety and health management • Workplace inspections, and • Maintenance of safety and health records. Resources are assigned to establish, implement, maintain and improve the safety and health management system and performance.
AA	Internal audit or assessment conducted within the past three years confirms the planning, implementation and operation of the safety and health management system meet all of the Level A requirements.
AAA	External audit or assessment conducted within the past three years confirms the planning, implementation and operation of the safety and health management system meet all of the Level A requirements.

Planning, Implementation and Operation
FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
1	What is formal Hazard Identification and Risk Assessment (HIRA)?	*See page 16*
5	Can corporate documentation be used to demonstrate facility-level commitment?	*See page 17*
9	For how long are internal and external assessments or audits valid?	*See page 17*
11	What is meant by "planning"?	*See page 18*
14	What does "formal" mean?	*See page 18*
15	What is a System?	*See page 18*
16	What does "effective" mean?	*See page 19*

Planning, Implementation and Operation
SUPPORTING GUIDELINES

Through interview and review of documentation, determine that:

- The system in place conforms to the company's standards and expectations, including those presented within its safety and health policy
- The system includes a planning phase with hazard identification and risk assessment (HIRA) and controls outlined. The controls and standards are designed to ensure compliance with legal and other requirements and for meeting objectives and targets
- There has been consultation and involvement with the workforce and the joint health and safety committee (where established) and consideration given for the local language and applicable cultural consideration
- The system is operational and the organization can provide documentation on its implementation and use
- Workplace health hazard identification and assessment and health monitoring is well documented
- The system includes a functioning document management system

3. TRAINING, BEHAVIOUR AND CULTURE

Purpose:

To confirm that processes have been established to effectively train employees and contractors on safety and health to ensure they are competent in identifying hazards and preventing incidents and they understand that safety and health is a shared responsibility and that safety behaviour is integral to controlling risk.

Training, Behaviour and Culture **ASSESSMENT CRITERIA**	
Level	**Criteria**
C	No safety and health training programs, and/or no job/worker observation program.
B	Some safety and health training has been provided at this facility. However, no formal safety and health training needs analysis has been completed, or the training program is not formalized. Job/worker observations are completed in some cases, but they are not conducted routinely and consistently.
A	Formal, documented and fully functional safety and health training program is in place that includes: ▪ Formal training needs analysis, including consideration of required skills and competencies ▪ Risk-based training ▪ Orientation training for all employees, contractors and visitors The formal training program is updated annually, implemented and tracked. Resources are assigned annually to enable implementation of the training program. Trainees and trainers are formally assessed for competency. Training is designed to implement hazard identification and reporting programs with a focus on prevention and proactive measures. A formal job/worker observation program supports and reinforces training to ensure routine safety checks and coaching are in place to encourage safe behaviour and work practices.
AA	The senior leaders at the facility demonstrate a continuous commitment to safety and health. They provide leadership to drive the organization to zero harm; assess and respond to high potential events, treating them as learning opportunities; and hold each individual in the business accountable for safety and health. The facility encourages a safety-based culture by integrating safety and health criteria into

	core business processes and practices, including: ▪ the annual business plan ▪ purchasing decisions ▪ performance appraisals for all staff, and ▪ the compensation system (i.e. compensation is affected by safety and health performance). The facility's programs promote and encourage health and wellness and healthy lifestyle.
AAA	The commitment to safety and health is visibly embedded throughout the facility. Line management operates an organization where risk management is done primarily through integrated systems that include safety and health requirements. Management visibly demonstrates commitment with one-on-one interactions with employees.

Training, Behaviour and Culture
FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
4	What are "Job Safety Observations"?	*See page 16*
5	Can corporate documentation be used to demonstrate facility-level commitment?	*See page 17*
13	What is "compensation"?	*See page 18*
14	What does "formal" mean?	*See page 18*
15	What is a System?	*See page 18*
16	What does "effective" mean?	*See page 19*

Training, Behaviour and Culture
SUPPORTING GUIDELINES

Through interview and review of documentation, determine that:

- A training analysis has been conducted and the training system has been designed and implemented to respond to the results of the training needs analysis
- Adequate resources have been assigned to enable implementation of the training program. The system, its communication to employees and contractors, and the associated training programs include hazard identification, risk assessment and control processes, and their communication. It also actively promotes safe and healthy behaviour and wellness.
- Competency-based training programs are in place for employees
- Training is required for contractors
- The orientation program for new employees and contractors includes a detailed safety and health training component
- The training systems are operational and the organization can provide documentation on its implementation and use
- The training program is reviewed annually to ensure it remains current and effective

4. MONITORING AND REPORTING

Purpose:

To confirm that safety and health performance is regularly monitored and reported both internally and externally.

Monitoring and Reporting **ASSESSMENT CRITERIA**	
Level	**Criteria**
C	No formal and regular monitoring and reporting of safety and health performance beyond regulated requirements
B	Some safety and health metrics are monitored and reported to facility management on a regular basis, going beyond regulatory requirements. Key performance indicators are reported or posted within the facility. Performance measures are not reported publicly.
A	Formal, documented and fully functional safety and health monitoring and reporting program is in place that includes: ▪ Performance metrics that are clearly defined, consistently applied, regularly assessed and reported, and used for trending and prioritizing improvements ▪ Monitoring program that includes tracking and internal reporting of leading and lagging indicators, safety and health inspection and monitoring, health surveillance, and incident investigation and follow up. ▪ A formal safety and health audit program is in place, and compliance audits and management system audits are conducted in accordance with the audit plan ▪ The facility assesses the adequacy and effectiveness of its safety and health management system annually and makes recommendations on how to make continual improvement ▪ Regular management review of safety and health performance and the results of the management system review to inform decision-making ▪ Results of workplace monitoring, inspection and follow-up action are reported or posted routinely within the facility ▪ Annual public reporting of safety and health performance
AA	The facility has internally audited or assessed the safety and health data and information collection, compilation and reporting systems in place to ensure a consistent process is used to collect reliable data and information.

Monitoring and Reporting

ASSESSMENT CRITERIA (continued)

AAA	The facility has externally audited or assessed the safety and health data and information collection, compilation and reporting systems in place to ensure a consistent process is used to collect reliable data and information.

Monitoring and Reporting
FREQUENTLY ASKED QUESTIONS

#	FAQ	PAGE #
5	Can corporate documentation be used to demonstrate facility-level commitment?	*See page 17*
8	What is the expected focus of audit or assessment activities?	*See page 17*
9	For how long are internal and external assessments or audits valid?	*See page 17*
12	What is "occupation workplace monitoring"?	*See page 18*
14	What does "formal" mean?	*See page 18*
15	What is a System?	*See page 18*
16	What does "effective" mean?	*See page 19*

Monitoring and Reporting
SUPPORTING GUIDELINES

Through interview and review of documentation, determine that:

- The facility has processes in place for tracking safety and health performance
- Performance indicators are tracked, and whether these indicators include leading and lagging indicators, results of safety and health inspection and monitoring, health surveillance, and incident investigation and follow-up
- Consistent approaches to collecting, compiling and analysing safety and health data are in place, and that these practices are documented where appropriate
- Performance metrics are used for trending and prioritizing improvements
- Responsibility has been assigned for monitoring and reporting on safety and health performance
- A formal annual review of the safety and health management system occurs to assess the effectiveness and adequacy of the management system, and if the results are reported to facility management
- There is a safety and health audit program in place, and if the audit plan includes both compliance and management system audits
- The frequency with which safety and health performance data and information are reported to facility management, and how these data and information are used to inform decision-making
- Key performance indicators are communicated to facility personnel and, if so, how
- Results of workplace monitoring, inspection and follow-up action are reported or posted routinely within the facility
- Key safety and health indicators are reported publicly and, if so, how
- Systems and programs are in place to enable periodic internal and/or external audit or assessment of the safety and health reporting system, and whether internal and/or external audits or assessments have occurred within the past three years

5. PERFORMANCE

Purpose:

Recognizing that zero harm is the ultimate goal for all facilities, the purpose of this indicator is to confirm that continual improvement targets have been established at each facility to move toward zero harm and that performance relative to targets is regularly assessed.

If a facility has had a fatality within the reporting year, it is not eligible for Performance Level A or higher.

Performance – Assessment Criteria	
Level	**Criteria**
C	No safety and health performance targets have been established for employees of the facility.
B	A system is in place for setting safety and health performance targets for employees of the facility. Targets may not include performance of contractors. Performance targets are consistently tracked. There is a system for communicating targets and related performance. Site management is involved in setting performance targets.
A	Performance targets for employees and contractors are established and communicated annually. Site management is involved in setting, reviewing, and improving performance relative to targets. Performance targets are regularly tracked, trended and assessed. There is a formal process to communicate performance results to the facility and workforce.
AA	Performance targets are set for both leading and lagging indicators. Senior company management regularly reviews site targets and improvement plans through formal meetings. Facility (or company) benchmarks its safety and health performance against its peers.
AAA	The facility has consistently met its continual improvement performance targets (at least 3 of the last 4 years) and is fatality free over the entire four year period. The facility externally audits or assesses its safety and health performance to ensure accuracy and reliability of performance information.

Performance
FREQUENTLY ASKED QUESTIONS

Performance
SUPPORTING GUIDELINES

Through interview and review of documentation, determine that:

- The system utilized for setting safety and health performance targets including whether the system is informal or formal
- The established targets encourage continual performance improvement
- The targets relate to safety and health performance of both employees and contractors
- Performance targets are tracked, trended, and assessed
- Management is involved it in setting, reviewing, and improving performance targets
- Performance targets and results are governed by and reviewed by management and company leaders
- Periodic reviews for continual improvements are performed relative to programs, guidelines, systems, and processes
- Compensation is linked to safety and health performance
- The facility conducts peer benchmarking of safety and health targets and performance

Frequently Asked Questions

PROTOCOL-SPECIFIC GUIDANCE

1. **What is formal Hazard Identification and Risk Assessment (HIRA)?**

   Formal HIRA is a documented process that ensures that all safety and health hazards have been identified, the level of risk assessed, and controls put into place to manage the risk. A typical HIRA process includes the following.

   - Site surveys
   - Hierarchy of controls
   - Risk register
   - Hazops and Failsafe processes
   - Management of Change
   - Job Safety Analysis
   - Field-based risk assessments (or similar)

To demonstrate that a facility has "formal hazard identification, risk assessment and control processes" in place, it is expected the facility would have documented processes to identify hazards, assess associated risks and identify appropriate controls. A documented or electronic risk register would identify site hazards and controls in place to address the hazards, and the facility would have a risk assessment tool or process that can be applied at the field level.

2. **What does occupational health mean?**

Occupational health is the maintenance of a worker's physical, mental and well being within the work environment.

3. **How do you determine if a safety and health policy is consistent with the MAC Safety and Health Framework?**

The MAC Safety and Health Framework establishes a number of commitments that MAC member companies agree to follow. The spirit and intent of a company's safety and health policy should be consistent with the spirit and intent of the MAC Safety and Health Framework. While it is not required that a corporate policy include all of the specific commitments identified in the Framework, the corporate policy should demonstrate general support and alignment with the MAC Safety and Health Framework, without expressly referring to it.

4. **What are "Job Safety Observations"?**

Job Safety Observations help to eliminate unsafe or hazardous acts and conditions. It actively encourages the whole workforce to be involved and therefore generates greater safety awareness both individually and collectively. It is a formal process normally performed by supervision and management with the involvement of the workforce. There are four fundamental steps in a Job Safety Observation process: (1) plan to observe; (2) observe a task; (3) provide positive feedback or reinstruction back to the worker(s): and (4) look for a commitment to continue to perform the work in a healthy and safe manner. The observation

process can be used to check in on the effectiveness of hazard identification and risk assessment programs as well as health and safety management systems (e.g. field level risk assessments, procedures, training, rules and standards, results of safety investigations).

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

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

6. What is meant by "contractors and suppliers at the facility"?

This term refers to vendors and contractors who work at the mine site or who physically enter the site. It is expected that a facility communicates relevant health and safety policy requirements to those contractors and suppliers who work at or physically enter the site.

7. What level of benchmarking is adequate?

For Indicator 5: Performance (Level AA), it is expected that the facility or company will compare its safety and health performance with the performance of other companies on a regular basis (i.e. within the last three years). Facilities or companies can use any of a number of methods or sources to obtain these comparative data including, for example, use published industry data (where available), compilation of publicly available data, participation in benchmarking studies or initiation of benchmarking studies.

8. What would prevent a facility from achieving a level A for indicator 5?

Facilities that have experienced an occupational fatality within the reporting year are not eligible for level A or higher for indicator 5 (performance). An occupational fatality is defined as the death of an employee, contractor or visitor because of a work-related incident arising from an activity under management control.

AUDIT OR ASSESSMENT

9. What is the expected focus of audit or assessment activities?

For Indicator 4: Monitoring and Reporting, it is expected that audit or assessment activities would assess the processes in place for collecting, compiling and reporting safety and health data and information to confirm that defined processes are in place and to test that these processes are being consistently applied.

For Indicator 5: Performance (Level AAA), it is expected that external audit or assessment activities would test the robustness and accuracy of collected safety and health performance data by reviewing the base data that are collected, testing that these data were accurately screened and entered into a database, and conducting a data review of the aggregate numbers.

10. For how long are internal and external assessments or audits valid?

An internal or external audit or assessment that was completed within the last three (3) years meets the requirements for an internal or external audit or assessment as required by Level AA or Level AAA in many of the indicators of this Protocol.

DEFINITION OF KEY TERMS

11. How is "senior management" defined?

For the purposes of Safety and Health performance measurement, senior management refers to the most senior level of management at the facility level (such as the General Manager, Site Manager, etc.). Where the protocol requires that accountability for safety and health be assigned at all levels, the expectation would be that accountabilities at the site and at the business unit, regional or corporate level be defined (depending on the corporate structure and location of headquarters). Verification of this requirement will not require engagement with corporate headquarters located outside of Canada or North America.

12. What is meant by "planning"?

Planning includes activities such as identifying hazards, assessing risk, and determining controls; identifying and having access to applicable legal requirements; and, establishing and maintaining documented objectives and supporting programs at relevant functions and levels within the facility. *(adapted from OHSAS 18001:2007)*

13. What is "occupation workplace monitoring"?

Occupation Workplace Monitoring may include, but is not limited to, such items as workplace examination, industrial hygiene monitoring, fitness for duty monitoring, ambient workplace conditions, or other similar activities.

14. What is "compensation"?

Compensation is defined as the total rewards package provided to employees.

15. What does "formal" mean?

The term "formal" is used frequently in the assessment, and usually in conjunction with "system" or "process". Formalized processes or activities are usually given status through clear and precise requirements, usually 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".

16. What is a System?

A system, or "management system" represents processes 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.

17. 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.

18. What does "accountability" mean?

Accountability: The safety and health management system must identify the party who is <u>ultimately answerable</u> for safety and health performance and the development and implementation of the safety and health 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 safety and health goals.

19. What does "responsibility" mean?

Responsibility: Within the safety and health management system, specific safety and health 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.

USEFUL REFERENCES

MAC considered the useful approach presented in the following publication during preparation of this protocol:

ICMM. *Leadership Matters: Elimination of Fatalities.* 2009. http://www.icmm.com/page/12629/leadership-matters-the-elimination-of-fatalities

APPENDIX 2: TSM SELF-ASSESSMENT CHECKLIST

Safety and Health

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: POLICY, COMMITMENT AND ACCOUNTABILITY						
Indicator 1 Level B		Is a formal safety and health policy in place?				
		If so, has the policy been communicated to staff?				
		Has accountability for safety and health been assigned to a senior management representative at the facility?				
		Is safety and health generally understood as everyone's responsibility?				
		If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.				
Indicator 1 Level A		Are policy commitments defined and authorized by the company's senior management?				
		Are policy commitments consistent with the intent of the MAC Safety and Health Framework?				
		Has the Policy been communicated to staff, contractors and suppliers at the facility?				
		Are accountabilities documented and understood at all levels?				
		If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.				
Indicator 1 Level AA		Has an internal audit or assessment confirmed that:				
		■ The policy is consistent with the intent of the MAC Safety and Health Framework?				
		■ Accountabilities are documented and understood?				
		■ The policy has been communicated to staff, contractors and suppliers at the facility?				
		If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA questions. If you have not answered "Yes" to all of the Level AA questions, assess the facility as a Level A.				
Indicator 1 Level AAA		Has an external audit or assessment confirmed that:				
		■ The policy is consistent with the intent of the MAC Safety and Health Framework?				
		■ Accountabilities are documented and understood?				
		■ The policy has been communicated to staff, contractors and suppliers at the facility?				
		If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.				
		ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 1				**Level:** _____

		Question	Y	N	NA	Description & Evidence

	Question	Y	N	NA	Description & Evidence
INDICATOR 2: PLANNING, IMPLEMENTATION AND OPERATION					
Indicator 2 Level B	Have safety and health management systems been developed?				
	Are risk control tools in place?				
	Are safety standards and procedures in place?				
	If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.				
Indicator 2 Level A	Is a formal and documented safety and health management system in place and fully implemented?				
	At a minimum, does it incorporate:				
	■ Documented objectives and targets, with supporting plans to achieve them?				
	■ Formal hazard identification, risk assessment and control processes?				
	■ Documented safety standards and procedures?				
	■ Defined and documented roles and responsibilities for safety and health management?				
	■ Workplace inspections?				
	■ Maintenance of safety and health records?				
	Are adequate resources assigned to establish, implement, maintain and improve the safety and health management system and performance?				
	If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.				
Indicator 2 Level AA	Has an internal audit or assessment conducted within the past three years confirmed that the planning, implementation and operation of the safety and health management system meet all of the Level A requirements?				
	If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA questions. If you have not answered "Yes" to all of the Level AA questions, assess the facility as a Level A.				
Indicator 2 Level AAA	Has an external audit or assessment conducted within the past three years confirmed that the planning, implementation and operation of the safety and health management system meet all of the Level A requirements?				
	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 2	**Level: _____**			

		Question	Y	N	NA	Description & Evidence
		INDICATOR 3: TRAINING, BEHAVIOUR AND CULTURE				
Indicator 3 Level B		Are there safety and health training programs in place at this facility?				
		Are job/worker observations completed in some cases at this facility?				
		If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.				
Indicator 3 Level A		Is a formal, documented and fully functional safety and health training program in place?				
		If so, does it include: ■ Formal training needs analysis, including consideration of required skills and competencies?				
		■ Risk-based training?				
		■ Orientation training for all employees, contractors and visitors?				
		Is the formal training program updated annually, implemented and tracked?				
		Are resources assigned annually to enable implementation of the training program?				
		Are trainees and trainers formally assessed for competency?				
		Is training designed to implement hazard identification and reporting programs with a focus on prevention and proactive measures?				
		Is there a formal job/worker observation program that supports and reinforces training to ensure routine safety checks and coaching are in place to encourage safe behaviour and work practices?				
		If you have answered "Yes" to all of the Level A questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.				
Indicator 3 Level AA		Do the senior leaders at the facility demonstrate a continuous commitment to safety and health?				
		Do senior leaders: ■ Provide leadership to drive the organization to zero harm?				
		■ Assess and respond to high potential events, treating them as learning opportunities?				
		■ Hold each individual in the business accountable for safety and health?				
		Does the facility encourage a safety-based culture by integrating safety and health criteria into core business processes and practices, including: ■ The annual business plan?				
		■ Purchasing decisions?				
		■ Performance appraisals for all staff?				

	Question	Y	N	NA	Description & Evidence
	■ The compensation system (i.e. compensation is affected by safety and health performance)?				
	Do the facility's programs promote and encourage health and wellness and healthy lifestyle?				
	If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA question. If you have not answered "Yes" to the Level AA questions, assess the facility as a Level A.				
Indicator 3 Level AAA	Is the commitment to safety and health visibly embedded throughout the facility?				
	Does line management operate an organization where risk management is done primarily through integrated systems that include safety and health requirements?				
	Does management visibly demonstrate commitment with one-on-one interactions with employees?				
	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 3	**Level:** _____			

		Question	Y	N	NA	Description & Evidence
INDICATOR 4: MONITORING AND REPORTING						
Indicator 4 Level B		Are some safety and health metrics monitored and reported to facility management on a regular basis, beyond regulatory requirements?				
		Are key performance indicators reported or posted within the facility?				
		If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.				
Indicator 4 Level A		Is there a formal, documented and fully functional safety and health monitoring and reporting program in place that includes:				
	■	Performance metrics that are clearly defined, consistently applied, regularly assessed and reported, and used for trending and prioritizing improvements?				
	■	Monitoring program that includes tracking and internal reporting of leading and lagging indicators, safety and health inspection and monitoring, health surveillance, and incident investigation and follow up?				
	■	A formal safety and health audit program, with compliance audits and management system audits conducted in accordance with the audit plan?				
	■	Annual assessment of the adequacy and effectiveness of the safety and health management system, including recommendations on how to make continual improvement?				
	■	Regular management review of safety and health performance and the results of the management system review are used to inform decision-making?				
	■	Routine reporting or posting of the results of workplace monitoring, inspection and follow-up action within the facility?				
	■	Annual public reporting of safety and health performance?				
		If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.				
Indicator 4 Level AA		Has an internal audit or assessment been conducted of the safety and health data and information collection, compilation and reporting systems in place to ensure accuracy of the reported performance data and information?				
		If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA question. If you have not answered "Yes" to the Level AA questions, assess the facility as a Level A.				

	Question	Y	N	NA	Description & Evidence
Indicator 4 Level AAA	Has an external audit or assessment been conducted of the safety and health data and information collection, compilation and reporting systems in place to ensure accuracy of the reported performance data and information?				
	If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 4	**Level:** _____			

		Question	Y	N	NA	Description & Evidence
INDICATOR 5: PERFORMANCE						
Indicator 5 Level B		Is there a system in place for setting safety and health performance targets for employees of the facility?				
		Are performance targets consistently tracked?				
		Is there a system for communicating targets and related performance?				
		Is site management involved in setting performance targets?				
		If you have answered "Yes" to all of the Level B questions, continue to the Level A questions. If you have not answered "Yes" to all of the Level B questions, assess the facility as a Level C.				
Indicator 5 Level A		Are performance targets for employees and contractors established and communicated annually?				
		Is site management involved in setting, reviewing, and improving performance relative to targets?				
		Are performance targets regularly tracked, trended and assessed?				
		Is there a formal process to communicate performance results to the facility and workforce?				
		If you have answered "Yes" to all of the Level A questions, continue to the Level AA questions. If you have not answered "Yes" to all of the Level A questions, assess the facility as a Level B.				
Indicator 5 Level AA		Are performance targets set for both leading and lagging indicators?				
		Does senior company management regularly review site targets and improvement plans through formal meetings?				
		Does the facility (or company) benchmarks its safety and health performance against its peers?				
		If you have answered "Yes" to all of the Level AA questions, continue to the Level AAA question. If you have not answered "Yes" to the Level AA questions, assess the facility as a Level A.				
Indicator 5 Level AAA		Has the facility consistently met its continual improvement performance targets (at least 3 of the last 4 years)?				
		Was the facility fatality free over the entire four year period?				
		Does the facility externally audit or assess its safety and health performance to ensure accuracy and reliability of performance information?				
		If you have answered "Yes" to all of the Level AAA questions, assess the facility as a Level AAA. If you have not answered "Yes" to all of the Level AAA questions, assess the facility as a Level AA.				
	ASSESSED LEVEL OF PERFORMANCE FOR INDICATOR 5					**Level:** _____