



In response to the letter of 17 December 2020 regarding the *Global Industry Standard on Tailings Management* (the Standard), Excellon Resources Inc. supports the ultimate goal of the Standard, which is “zero harm to people and the environment with zero tolerance for human fatality” (*sic*).

Excellon Resources Inc. is in the process of implementing the Towards Sustainable Mining® (TSM) program developed by the Mining Association of Canada (MAC). The objective of the tailings management component of TSM is to “continually work towards minimizing harm”, which “encompasses both physical and chemical performance and risks associated with tailings facilities, including:

- zero catastrophic failures of tailings facilities; and
- no significant adverse effects on the environment or human health.”

The tailings management component of TSM consists of:

- *Tailings Management Protocol*
- *Guide to the Management of Tailings Facilities* (the Tailings Guide)
- *Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities* (the OMS Guide)
- Table of Conformance

These elements are further described below.

As part of implementing process of the *TSM protocol*, Excellon Resources Inc. also implements the *Aboriginal and Community Outreach Protocol*, replaced in 2019 by the *Indigenous and Community Relationships Protocol* which seeks to confirm that:

- processes are in place to identify communities of interest, including Indigenous communities and organizations;
- processes have been established to support the development and maintenance of meaningful relationships with communities of interest;
- mining facilities are actively building meaningful relationships and implementing engagement and decision-making processes with Indigenous communities;
- processes have been established to mitigate adverse community impacts and optimize social benefits generated from facilities; and
- processes are in place to respond to incidents, concerns, and feedback from communities of interest.

Public reporting of performance against the updated protocol will begin in 2022.

Excellon Resources Inc.’s performance against all TSM protocols is publicly reported and is available on MAC’s website: <https://mining.ca/towards-sustainable-mining/tsm-progress-report/>

Based on an assessment conducted by MAC of equivalency between the Standard and current TSM requirements, and based on Excellon Resources Inc.’s performance against the *Tailings Management Protocol*, we are working towards implementing 31 of 77 requirements in the Standard.

MAC has not assessed equivalency against the *Aboriginal and Community Outreach Protocol*, as this protocol will be replaced by the *Indigenous and Community Relationships Protocol* beginning in 2021. MAC has determined that the requirements of this new protocol meet or exceed 8 requirements in the

Standard. By the end of 2021, Excellon Resources Inc. met or exceeded 35 of the 77 requirements in the Standard by achieving MAC's minimum performance expectations for the *Indigenous and Community Relationships Protocol* and will continue making progress developing and implementing the *MAC Tailings Management Protocol*.

In November 2020, MAC's Board of Directors approved a proposal to review the tailings management component of *TSM*. Expected outcomes of this review include:

- Application of the *Tailings Management Protocol* to closed and inactive tailings facilities would be mandatory. Application is currently voluntary.
- Revisions to the tailings management component of *TSM* to further increase the degree of equivalency between *TSM* and the Standard.
  - As a result of these proposed changes, the *TSM* requirements would meet or exceed at least 54 of the 77 requirements in the Standard, with the remaining 23 requirements still to be discussed.
- Further consideration of application of the *Tailings Management Protocol* to new tailings facilities in the planning, design, and initial construction phases of the life cycle.
  - This change would be more complex than application to closed and inactive tailings facilities, and MAC expects to test application before making a decision on whether or not to make this mandatory.

MAC is proceeding with this work on a priority basis and is expecting to make a final decision on revisions to the tailings management component of *TSM* by mid-2021. MAC will provide members with a transition period for implementation, with 2024 as the potential target date for implementation.

Excellon Resources Inc. intends to continue implementing the tailings management component of *TSM*. Adherence is a condition of MAC membership, and *TSM* has significant strengths when compared to the Standard:

- The tailings management component of *TSM* reflects more than 20 years of implementation experience, and input from an independent review conducted in 2015. It provides a well-defined, thorough, and rigorous level of performance measurement.
- In the key areas of tailings management systems and OMS, essential to managing risk, making informed decisions, and preventing human error, *TSM* is, in our view, superior to the Standard, providing a foundation for a better integrated approach. Tailings facilities are complex and constantly changing, and this high degree of integration of activities related to tailings management is critical to achieving the objective of minimizing harm.
- *TSM* provides a greater degree of program maturity and an established means to measure and report on performance.

Once MAC has approved the changes to the tailings management component of *TSM* and the associated transition period, Excellon Resources Inc. will determine what other steps, if any, to be taken to be in conformance with the Standard.

### **The Tailings Management Component of *TSM***

The tailings management component of *TSM* consists of the following elements.

#### ***Tailings Management Protocol (the Protocol)***

The Protocol, first introduced in 2004 and updated in 2017 and 2019, describes performance indicators and criteria to measure performance related to tailings management in five key areas:

- Establishing and communicating a policy that express intention, commitments, and principles in relation to tailings management.
- Assigning accountability for tailings management to a corporate executive and putting in place the management structure, systems, and resources needed to manage tailings responsibly.
- Developing and implementing a tailings facility-specific:
  - tailings management system;
  - operations, maintenance, and surveillance (OMS) manual; and
  - plans to respond in the event of an emergency;
- Conducting an annual review, reported to the accountable corporate executive, to verify whether tailings management is effective, and develop action plans to address deficiencies or opportunities for continual improvement.

### ***Guide to the Management of Tailings Facilities (the Tailings Guide)***

The Tailings Guide was first developed in 1998 and a second edition was released in 2011. The extensively revised third edition was released in 2017, and Version 3.1 was subsequently released in 2019. The Tailings Guide provides guidance on best practices for responsible tailings management, including the development and implementation of tailings management systems that provide a:

- governance framework for tailings management and risk-informed decision-making;
- means to facilitate effective communications related to tailings management;
- mechanism to help ensure that change is responsibly managed; and
- mechanism to improve the application of engineering and management principles to tailings facilities.

### ***Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities (the OMS Guide)***

The OMS Guide was first developed in 2003, and a completely revised second edition was released in 2019. The OMS Guide provides guidance on developing site-specific OMS manuals. Operations, maintenance, and surveillance activities are essential to implementing a tailings management system, effectively managing risk, and meeting performance objectives.

### **Table of Conformance**

Requirements described in the performance indicators in the Protocol must be implemented in conformance with the Tailings Guide and the OMS Guide. The Table of Conformance, introduced in 2017 and expanded in 2019, provides a rigorous link between the Protocol and the Tailings Guides and the OMS guide, identifying, in significant detail, elements of each Guide to be implemented to meet the performance criteria described for each indicator in the Protocol. To illustrate the level of detail in the Table of Conformance, there are:

- 70 required items related to tailings management systems;
- 122 required items related to OMS manuals; and
- 31 required items related to emergency preparedness.