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Mine closure and reclamation — Terminology

Terminologie relative à la fermeture et à la restauration des mines

ICS: 01.040.73; 73.020

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 82.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This terminology standard has been prepared to facilitate effective communication within the subject field of mine closure and reclamation and that key terminology concepts and concept representations are agreed and used amongst participants. Specifically, this standard should be used to interpret and apply concepts and concept representations presented within mine closure and reclamation standards developed by ISO under TC82/SC7.

To prepare this standard candidate terms were sourced from relevant mine closure and reclamation documentation and from lists provided by participants. Candidate terms were assessed and filtered on the basis of the following criteria:

- Is the term used within, and considered critical to, potential future ISO mine closure and reclamation standards consistent with the Strategic Plan for SC7 or documentation existing or being prepared.
- Is the term sufficiently important to avoid misunderstanding or ambiguity, such as where an alternative or conflicting definition exists or is in common use.
- Does the term express or represent a fundamental concept within mine closure and reclamation that is required to achieve a common understanding, including amongst non-expert stakeholders.

In selecting terms for inclusion within this standard every effort has been made to avoid:

- General terms used across, and common to, subject fields other than mine closure and reclamation.
- Use of a single term for multiple concepts or multiple terms for a single concept.
- Contradictions occurring in terminological entries in other standards prepared under TC82.

Where a term was identified within the ISO terminology database the definition was reviewed and adopted, in preference, if applicable in the mine closure and reclamation context. All terms presented within this standard have been presented from the perspective, and within the context, of the mine closure and reclamation subject field. It is acknowledged that several terminological standards are being concurrently prepared under ISO TC82/WG8 (i.e. ISO 22932). It is considered however that these standards have not progressed sufficiently to be used as normative references. It is expected that they will be reviewed as part of future reviews of this standard.

Initial formulation of concepts from candidate terms, including revision of definitions based on concept characteristics, has been undertaken however such formulation of concepts is ongoing and will be reflected in further revisions of the standard.

This standard is not intended to present an exhaustive list of all terms or concepts utilized within mine closure and reclamation. It is expected that revisions to this standard will be required as further mine closure and reclamation standards are developed under TC82/SC7.

Where concepts and terms have been defined within a specific mine closure and reclamation standard that definition will supersede any term or definition presented within this standard.

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Mine closure and reclamation — Terminology

1 Scope

This standard specifies key terms and concepts in mine closure and reclamation management. Terms on mine closure and reclamation management have been classified into ten parts representing key concepts within the subject field:

- *Mine Closure Status*
- *Mine Closure Phase*
- *Mine Closure Strategy*
- *Mine Features*
- *Mine Materials*
- *Mine Closure Risks*
- *Mine Closure Treatments*
- *Mine Closure Activities*
- *Mine Closure Finance*
- *Social Closure*

Future revisions of the standard will reflect ongoing work to formulate and define terminological concepts within these categories.

2 Normative references

There are no normative references used in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1 terms related to the operational status of a mine or mine feature with respect to mine closure phase.

3.1.1

abandoned

mine or mine feature (3.4) which has not been formally *relinquished* (3.1.3) and for which the responsibility for *mine closure* (3.3.2) cannot be allocated to an individual, company or organization

Note 1 to entry: may also be referred to as a “derelict”, “orphan” or “legacy” mine.

Note 2 to entry: liability for an abandoned mine may fall to the landowner in the event of freeheld land.

**3.1.2
closed**

mine or mine feature (3.4) for which productive mining has ceased and for which the mine owner or operator has initiated *mine closure* (3.3.2)

**3.1.3
relinquished**

closed (3.1.2) mine or mine feature (3.4) for which *monitoring* (3.8.4) has been completed and tenure has been surrendered, with responsibility transferred to the relevant regulating authority or landowner

**3.1.4
suspended**

mine or mine feature (3.4) for which productive mining or processing have temporarily ceased and operations place in a *care and maintenance* (3.2.1) phase

3.2 terms related to the mine closure phase during which specific mine closure activities (3.8) are undertaken to achieve a specific mine closure status (3.1).

**3.2.1
care and maintenance**

period when a mine is *suspended* (3.1.4), and *mine facilities* (3.4.2) remain intact and are maintained in anticipation of production recommencing

Note 1 to entry: may also be referred to as temporary *mine closure* (3.3.2).

Note 2 to entry: may also refer, in some jurisdictions, to the post closure phase.

**3.2.2
implementation**

period when a mine is *closed* (3.1.2) and during which the *mine closure plan* (3.8.3.2) is executed

**3.2.3
planning**

period prior to implementation during which *mine closure planning* (3.8.3) is undertaken to progressively development the scope of closure

**3.2.4
post closure**

period following the *implementation* (3.2.2) phase when *monitoring* (3.8.4) and *maintenance* (3.8.2) activities are undertaken

**3.2.4.1
adaptive management**

period, following *implementation* (3.2.2), of iteratively *monitoring* (3.8.4), modifying and implementing closure treatments (3.7) to maintain desired closure outcome

**3.2.4.2
long term closure**

period following *implementation* (3.2.2) when *monitoring* (3.8.4) is undertaken and in which *maintenance* (3.8.2) is no longer required

3.3 terms related to the strategic or tactical elements of mine closure applied to a mine or mine feature (3.4) to achieve *post mining land use* (3.8.1.2) and *mine closure* (3.3.2) objectives

**3.3.1
decommissioning**

the de-energisation, removal and disposal of redundant *mine facilities* (3.4.2)

3.3.2**mine closure**

planning for, and implementation of, strategies associated with the completion of productive mining activities and establishment of the agreed *post mining land use* (3.8.1.2)

3.3.2.1**progressive mine closure**

staged and ongoing implementation of mine closure strategies for specific mine features (3.4) during the operating life of a mine

Note 1 to entry: all strategic and tactical elements of mine closure may be implemented progressively (e.g. progressive *reclamation* (3.3.3))

3.3.3**reclamation**

the making of disturbed land, associated with a mine or a mine feature (3.4), safe, stable, non-polluting state and consistent with the agreed *post mining land use* (3.8.1.2)

3.3.3.3**rehabilitation**

reclamation (3.3.3) of a mine feature (3.4), *domain* (3.4.1) or other area disturbed by mining to a sustainable condition in which ecosystem function is reinstated but for which *restoration* (3.3.3.5) is not the objective

Note 1 to entry: may, or may not, involve return of land to the pre-mining land use.

3.3.3.4**repurpose**

reclamation (3.3.3) of a mine feature (3.4), *domain* (3.4.1) or other area disturbed by mining to a commercially productive condition corresponding with a *post mining land use* (3.8.1.2) alternative to the pre-mining land use

3.3.3.5**restoration**

reclamation (3.3.3) of a mine feature (3.4), *domain* (3.4.1) or other area disturbed by mining to a sustainable condition corresponding with its natural or reference state

Note 1 to entry: generally, relates to the return of the natural ecosystem (i.e. ecological restoration) but may apply to return to the pre-mining condition

3.3.4**remediation**

the reduction of human and environmental exposure to contaminants or hazards to acceptable levels

3.4

terms related to unique mine features within mine that have a defined function or purpose, and which require specific *mine closure activities* (3.8) to achieve *post mining land use* (3.8.1.2) and *mine closure* (3.3.2) objectives.

3.4.1**domain**

group of *mine facilities* (3.4.2) that have a similar or common mine closure strategy (3.3)

Note 1 to entry: generally defined by a physical, cadastral or hydrological boundary

Note 2 to entry: may constitute one or more *post mining landforms* (3.4.4) with common geophysical characteristics.