
**Mine closure and reclamation
planning —**

**Part 1:
Requirements**

Planification de la fermeture et de la restauration des mines —

Partie 1: Exigences

ITeH Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 21795-1:2021](https://standards.iteh.ai/catalog/standards/iso/3bb495bb-5582-414b-ae3c-589b80a7fb62/iso-21795-1-2021)

<https://standards.iteh.ai/catalog/standards/iso/3bb495bb-5582-414b-ae3c-589b80a7fb62/iso-21795-1-2021>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 21795-1:2021](https://standards.iteh.ai/catalog/standards/iso/3bb495bb-5582-414b-ae3c-589b80a7fb62/iso-21795-1-2021)

<https://standards.iteh.ai/catalog/standards/iso/3bb495bb-5582-414b-ae3c-589b80a7fb62/iso-21795-1-2021>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Mine closure and reclamation planning framework	2
5 Framework elements for mine closure and reclamation planning	3
5.1 Responsibility.....	3
5.1.1 Mine operator responsibility.....	3
5.1.2 Stakeholder engagement.....	3
5.1.3 Regulations.....	3
5.1.4 Financial plan.....	3
5.2 Integration.....	4
5.2.1 Physical and chemical control for sustainable land and water use.....	4
5.2.2 Mine closure and reclamation treatment resilience.....	4
5.2.3 Long-term post-closure and reclamation.....	4
5.2.4 Social transition to closure.....	4
5.3 Design.....	4
5.3.1 Mine closure and reclamation objectives and commitments.....	4
5.3.2 Timely mine closure and reclamation planning.....	5
5.3.3 Mine design and operation for mine closure and reclamation.....	5
5.4 Risk and opportunity assessment and management.....	5
5.5 Evaluation and improvement.....	5
5.5.1 Quality assurance.....	5
5.5.2 Adaptive management.....	6
5.6 Knowledge and data management.....	6
6 Mine closure and reclamation planning activities	6
6.1 General.....	6
6.2 Mine closure and reclamation plan objectives and commitments.....	7
6.3 Technical procedures and techniques.....	8
6.3.1 General.....	8
6.3.2 Mine site characterization.....	8
6.3.3 Physical and chemical stability.....	8
6.3.4 Contaminated media.....	9
6.3.5 Infrastructure decommissioning and disposal.....	10
6.3.6 Post-closure land-use plan.....	10
6.3.7 Closure and reclamation plan alternatives and opportunities analyses.....	10
6.3.8 Reclamation.....	11
6.3.9 Progressive mine closure and reclamation.....	11
6.3.10 Mine closure and reclamation schedule.....	11
6.3.11 Mine closure and reclamation cost estimate.....	12
6.3.12 Management of risks and opportunities.....	12
6.4 Mitigating socio-economic impacts.....	12
6.5 Financial planning and assurance.....	13
6.6 Mine closure and reclamation planning for unplanned closure.....	13
6.7 Post-closure management plan.....	14
6.7.1 General.....	14
6.7.2 Closure criteria.....	14
6.7.3 Post-closure maintenance.....	14
6.8 Documentation.....	14
6.8.1 General.....	14
6.8.2 Mine closure and reclamation plan.....	15

6.8.3	Mine closure and reclamation plan updates.....	15
6.8.4	Knowledge and data management.....	15
Bibliography	16

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[ISO 21795-1:2021](https://standards.itih.ai/catalog/standards/iso/3bb495bb-5582-414b-ae3c-589b80a7fb62/iso-21795-1-2021)

<https://standards.itih.ai/catalog/standards/iso/3bb495bb-5582-414b-ae3c-589b80a7fb62/iso-21795-1-2021>