Record Nr. UNINA9910460035003321 Autore Blight G. E. Titolo Geotechnical engineering for mine waste storage facilities / / Geoffrey Blight Boca Raton:,: CRC Press,, 2010 Pubbl/distr/stampa **ISBN** 0-429-20647-X 1-134-99943-7 1-282-50387-1 9786612503870 0-203-85940-5 Edizione [1st ed.] Descrizione fisica 1 online resource (656 p.) Disciplina 622.0286 Soggetti Mineral industries - Waste disposal Waste disposal in the ground Environmental geotechnology Engineering geology Soil mechanics Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto ch. 1. Waste engineering, characteristics of mine wastes and types of waste storage -- ch. 2. Selection of a site for storage of mine waste -ch. 3. Geotechnical exploration of sites for development of mine waste storages -- ch. 4. Environmental and engineering characteristics of mine waste, including stress and strain analysis and laboratory shear testing -- ch. 5. In situ shear strength testing of tailings and other waste materials and its interpretation -- ch. 6. Measuring the coefficient of permeability in the laboratory and in situ, seepage flow nets, drains and linings, geosynthetics, geomembranes and GCL's --

ch. 7. The mechanics of compaction -- ch. 8. Methods for constructing impounding dykes for storing hydraulically transported tailings and other fine-grained wastes -- ch. 9. Water control and functional and safety monitoring for hydraulic fill tailings storages and dry dumps.

Safety appraisal. Special considerations for carbonaceous and radioactive wastes -- ch. 10. Water balances for tailings storage facilities and dry waste dumps -- ch. 11. Failures of mine waste storages -- ch. 12. Surface stability of tailings storages slopes: erosion rates, slope geometry and engineered erosion protection -- ch. 13. The use of mine waste for backfilling of mining voids and as a construction material.

## Sommario/riassunto

The book is a comprehensive treatment of the application of geotechnical engineering to site selection, site exploration, design, operation and closure of mine waste storage facilities. It has been developed from the official mining industry guide to the design and operation of tailings and waste rock storage facilities in South Africa, and also from a series of post graduate courses that have been taught at the University of the Witwatersrand, Johannesburg for many years. The level and content are suitable as a technical source and reference for practising engineers engaged both in the des