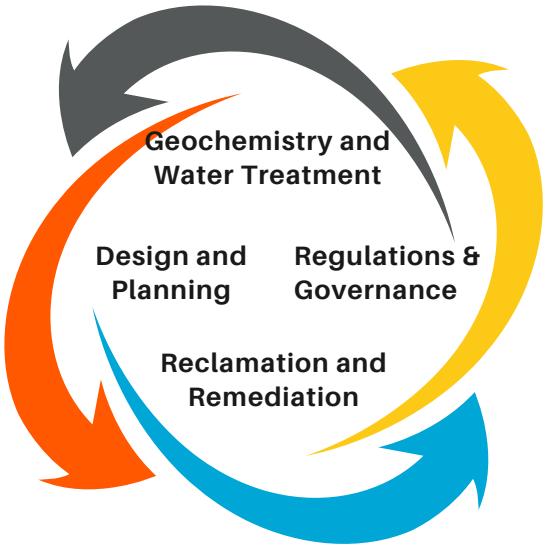
Mine Closure and Reclamation

Solum Consulting Group

Mine closure planning and cost estimation is necessary in all stages of a mining project, and it should be considered as an integral requirement for the development of a project. Moreover, it is necessary to obtain construction, operating and environmental permits. Solum has developed mine closure plans to meet government environmental requirements and the financial needs of its clients, backed by the experience and knowledge of our professional team members.

Key Services



- Closure planning
- Closure regulation workframe: Public affairs support
- Waste characterization
- Geochemical assessment
- Hydrologic assessment
- Seismic hazard evaluations
- Environmental assessment
- Earthworks design and stability
- Cover design
- Water deviation systems
- Permitting
- Cost estimates
- Reclamation design
- Tailings storage facility closure
- Acid Rock Drainage (ARD) management
- Seepage analysis
- Water quality predictions

Key Projects

(by Solum's Staff)

Closure Detailed Engineering of the TSF Closure

Naica Mine, State of Chihuahua (Peñoles)

Closure Detailed Engineering of the TSF Closuret

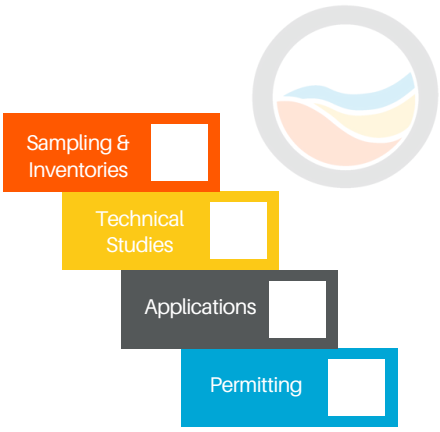
Tizapa Mne, State of Mexico (Peñoles)

The scope (similar for both projects) included data review, site visit, climatological and hydrological study, closure of the decanted water recovery system, pond water recovery system, infiltration analysis, limit equilibrium stability analysis, cover design, water balance and diversion channels. The scope also included hydraulic, electrical and instrumentation design.

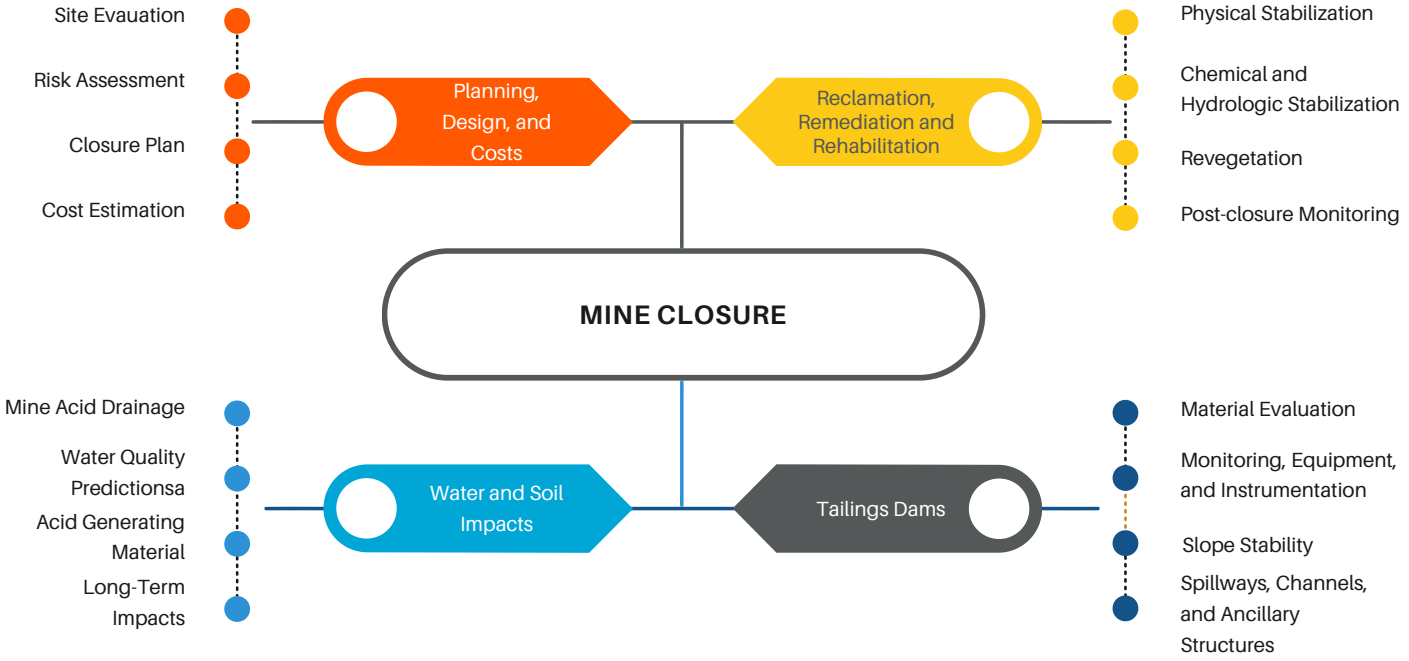
Closure Environmental Regulation

Environmental legal framework and instruments applicable to mine closure, legal requirements, environmental risks, and land use change.

Justification study for land use change - Sonora Lithium Project (Bacanora Minerals)



Sustainable Mine Closure



Social Responsibility

Part of a successful mine closure is to identify the impacts on stakeholders and its implications in terms of well-being and restoring living standards. Solum has developed management systems for effective community relations by identifying, evaluating and developing the following:

- Stakeholders
- Social Risks and Impacts
- Stakeholder Expectations
- Relation Levels
- Community Plans that include: negative impact prevention, mitigation, and compensation
- Effective Communication Plans

Socioeconomic and Social Management - Sonora Lithium Project (Bacanora Minerals)