



Reclamation and Closure Services for the Mining Industry

CEC provides a range of engineering and environmental services to all sectors (coal, aggregate, and hard rock) of the mining industry for the safe reclamation and closure of mines and processing facilities.

When mining companies need to close mine sites, CEC provides the environmental and engineering services necessary to do so safely and in a manner that complies with all applicable state and federal environmental laws and regulations, while also optimizing the company's cost considerations. The asset retirement obligations could include demolition of buildings and structures (including storage tank closures), filling in mine openings (for facilities with underground mines), earthwork to restore the site to approximate original contour or another desired configuration, revegetation, and post-closure water treatment.

CEC's services include the following:

ENVIRONMENTAL

- Environmental characterization and facility liability assessment
- Closure plan development (building demolition plans, mine sealing plans, backfill/grading plans)
- Agency interface for closure plan approval
- Mine site soil covering and revegetation plan development
- Decommissioning work plan preparation and alternatives evaluation: mothball, remediate and mothball, remediate and dismantle equipment (adaptive reuse), and complete demolition
- Water and soil / sediment control and remediation

ENGINEERING

- Removable and salvageable asset inventories
- Bid package development and bid support
- Asset retirement obligation estimating
- Construction management (owner's representative) and contractor oversight
- Construction quality assurance
- Surveying and field engineering support
- Rehabilitation and revegetation planning and design
- Visual simulations / aerial inspection

WASTE MANAGEMENT

- Asbestos
- Lead
- Polychlorinated biphenyls (PCBs)
- Oil and oily water
- De-ionization resins
- Mercury and mercury components
- Fluorescent lights and ballasts
- Miscellaneous chemicals
- On-site landfill closure

IMPACTED WATER

- Assimilate capacity studies
- TMDL effluent limits
- Active water treatment
- Passive water treatment

POST-CLOSURE MINE WATER EVALUATIONS

- Groundwater / surface-water interaction model recalibration
- Groundwater monitoring and remediation system design and operation
- Groundwater / surface-water levels and quality monitoring
- Dewatering and supply well design
- Dewatering quantification and management

