Mining companies must stay ahead of the curve to respond to regulatory changes as well as market changes.

With diversified expertise and deep bench strength, CEC is a valuable resource uniquely positioned to provide solutions that address the industry’s changing needs. CEC has successfully integrated civil and geotechnical engineering design with ecological and environmental expertise to offer a full suite of services that benefit the coal, aggregate and hardrock sectors of the mining industry. This multi-disciplined approach to mining industry consulting has led to the successful completion of a wide range of projects—from design and permitting of refuse disposal areas, to water treatment studies, to assessing and mitigating ecological resource impacts.

The strategic hiring of mining professionals has enabled CEC to harness the wealth of deep industry experience. These seasoned experts are able to identify challenges and address needs from the vantage point of the owner.

Civil & Environmental Consultants, Inc. (CEC) is a company of professionals who provide comprehensive facility planning, engineering, and environmental services. With diversified expertise and deep bench strength, CEC offers a full suite of services that benefit the coal, aggregate, and hardrock sectors of the mining industry. CEC’s multi-disciplined approach has led to the successful completion of a wide range of projects—from design and permitting of refuse disposal areas, to water treatment studies, to assessing and mitigating ecological resource impacts.
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MINE OPERATIONS

CEC has direct experience with the issues and requirements mining companies are facing, allowing operators to focus on achieving maximum output and return on investment.

Compliance

Whether you are a start-up or an established company, CEC’s environmental compliance specialists help you address or correct issues. CEC provides permit tracking tools to manage large amounts of environmental data, monitor compliance performance and track requirements for reporting. CEC helps you develop cost-effective variances to permit requirements, and can complement an existing staff. Our industry experts provide the technical backgrounds to tailor CEC’s internal resources to best meet mining companies’ needs.

Regulatory Insight

CEC relies on thorough knowledge of environmental regulations to determine applicable requirements. CEC is able to leverage established relationships with regulatory agencies and can complement an existing staff. Our industry experts provide the technical backgrounds to tailor CEC’s internal resources to best meet mining companies’ needs.

Environmental Compliance

CEC provides robust environmental services to tackle every aspect of permitting and monitoring required to manage mine development. CEC integrates environmental systems along with high-quality monitoring to help clients effectively both their environmental compliance and permitting obligations.

Environmental Expertise

CEC ensures the proper selection of monitoring instruments and methods and designs plans to mitigate impacts. CEC’s mobile laboratory personnel perform source emissions testing using a state-of-the-art mobile laboratory.

Environmental due diligence helps identify potential liabilities and characterize risk. Civil engineers and site designers provide permitting, construction management and CQA services, while scientists develop baseline air quality and can evaluate various methods of capturing and minimizing emissions. Meteorologists and air quality scientists perform exposure assessments for mining and processing operations and can complement a company’s existing staff.

Expansion Projects

Geologists evaluate in-situ reserve estimates, characterize lithology and identify geologic structures. Ecologically sensitive areas are identified to streamline the permitting process and minimize long-term effects on local ecosystems. Environmental due diligence helps identify potential liabilities and characterizes risk. Civil engineers and site designers provide permitting, construction management and CQA services, while scientists develop baseline air quality and can evaluate various methods of capturing and minimizing emissions. Meteorologists and air quality scientists perform exposure assessments for mining and processing operations and can complement a company’s existing staff.

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MINE CLOSURE

When reserves are exhausted or extraction becomes less economical, CEC provides the expertise mining companies need to transition through the closure process.

Site Reclamation

CEC designs and engineering and also manages the permitting and approval process for the closure of mine properties. Full consideration is given to reclamation site design, ensuring that vegetation and mining operations are designed to create new sustainable landscapes. CEC designs functional stream and wetland systems and creates biodiversity compensation through a variety of restoration techniques.

Air Quality and Water Quality Assurance

Meteorologists and air quality scientists model trends to predict impacts on human health and evaluate air quality and can develop various methods of limiting emissions to help clients comply with federal standards. Stormwater assessment and grading plans help direct storm flows through a variety of mitigation techniques. CEC designs functional stream and wetland systems and creates biodiversity compensation through a variety of restoration techniques.

Post-Mining Land Use

Site planners and civil engineers facilitate post-mining land use options to enhance the highest and best use available. CEC provides environmental and engineering services for diverse land use opportunities including commercial development and many properties go on to generate revenue. CEC’s real estate experts are instrumental to the process, helping to guide post-mining land use opportunities and many properties go on to generate revenue.

CEC’s comprehensive approach ensures that the highest and best use is achieved through cost-effective planning, design and implementation.

Restoring water quality

CEC understands the science behind the issues and can utilize existing staff. Our industry experts provide the technical backgrounds to tailor CEC’s internal resources to best meet mining companies’ needs.

Industry Experience

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**THE CEC ADVANTAGE**

The staff at Civil & Environmental Consultants, Inc. (CEC) are experts in our craft and ready to act as your strategic advisors and ready to recommend the best path forward for your organization. Our team knows the mining business from the inside and out — we are mining operators, as well as mining regulators and environmental engineers — and we bring our unique expertise to bear to help you navigate the regulatory challenges of the mining industry.

**Industry Experience**

CEC understands the mining business from the inside and out — we are mining operators, as well as mining regulators and environmental engineers — and we bring our unique expertise to bear to help you navigate the regulatory challenges of the mining industry. We have utilized our experience and strong regulatory and technical backgrounds to tailor CEC’s internal resources to better serve mining companies.

**Regulatory Insight**

CEC takes a thorough knowledge of environmental regulations to determine applicable requirements. CEC’s in-house regulatory insight helps clients navigate complex regulations and integrate into regulatory agencies, as well as lend valuable expertise in implementing the permitting process.

**Environmental Compliance**

CEC provides robust environmental services to tackle everything from permitting and compliance to permitting appeals. CEC’s in-depth knowledge of environmental systems along with high-quality monitoring help clients efficiently track their environmental compliance and reporting obligations.

**Ecological Expertise**

CEC measures the potential effects of mining on streams and methods and designs plans to mitigate impacts. Biological monitoring services can be implemented to develop cost-effective responses to permit requirements, reducing facility operations or reclamation costs.

**MINE OPERATIONS**

CEC has direct experience with the issues and requirements mining companies are facing, allowing operators to focus on maximizing output and return on investment.

**Compliance**

Whether your goal is to establish or maintain compliance, CEC’s environmental compliance audits help address or correct issues. CEC’s innovative tools help clients manage and track requirements for reporting.

**Hydrologic modeling, water quality impact assessments, and collection and treatment system design help clients manage their discharge. To characterize the size and scale of the emissions and to ensure that personal source performance testing is using a state-of-the-art testing laboratory.**

**Optimization**

CEC helps clients maximize profits by evaluating treatment processes to optimize systems or by determining ways to prevent system problems from occurring. CEC evaluates processes to optimize systems or by determining ways to prevent system problems from occurring.

**Expansion Projects**

Geotechnical evaluators in this resource enhance, characterize, and evaluate sites to enable the permitting process and minimize land-use effects on local ecosystems. Environmental due diligence helps identify potential liabilities and future regulatory risk. CEC’s due diligence expertise provides permitting, construction management, and CQA services, while a team of experienced hydrologists and geotechnical economists helps evaluate your water needs and potential development impacts.

**MINE CLOSURE**

When mines are exhausted or abandoned without adequate planning, CEC provides the expertise mining companies need to transition through the closure process.

**Site Reclamation**

CEC designs reclamation and engineering projects and manages the permitting process for reclamation projects. CEC integrates mine closure into the permitting process and ensures requirements are met.

**Air Quality and Water Quality Assistance**

Meteorologists and air quality scientists perform air modeling to predict impacts on human health and ambient air quality. CEC develops comprehensive water quality and flow assessments to determine which discharges are best for treatment and provides environmental and engineering services for transport and treatment systems.

**Post-Mining Land Use**

CEC’s expertise mining companies need to transition through the closure process.

**Mineral Right Use**

Whether you are a mining operator looking to optimize land use or a mining company looking to diversify, CEC can help you assess the potential value of your property and determine the best use for your assets.
MINE OPERATIONS

CEC has direct experience with the issues and requirements mining companies are facing, allowing operators to focus on achieving maximum output and return on investment.

- **Compliance**: Whether it’s to establish or maintain compliance, CEC environmental compliance auditors help address or correct issues. CEC’s innovative technology helps clients manage vast amounts of environmental data, monitor compliance performance and track requirements for reporting.

- **Hydrologic modeling**: Water quality impact assessments, and collective best treatment options design help clients manage their discharges. To characterize the type and magnitude of discharge and minimise and/or control personal source measures testing using a state-of-the-art analytical laboratory.

- **Optimization**: CEC helps clients maximize benefits by evaluating treatment processes to optimize systems or by determining ways to operate systems properly to reduce impacts, including pollution control systems in new or existing effluent and emission guidelines.

- **Expansion Projects**: Geologists evaluate in-situ reserve estimates, characterize lithology and identify geologic structures. Ecologists identify sensitive areas to streamline the permitting process and minimize long-term effects on local ecosystems. Environmental due diligence helps identify potential liabilities and characterize risk. Civil engineers and site planners provide environmental and engineering services for expansion projects, while hydrogeologists analyze groundwater models to evaluate process water needs and potential development impacts.

MINE CLOSURE

When reserves are exhausted or extraction becomes challenging, CEC provides the expertise mining companies need to transition through the closure process.

- **Site Reclamation**: CEC designs and engineers and also manages the permitting and approval process for mining companies. CEC is a partner in the development project, customizing project requirements, and ensuring success through cost-effective mining closure strategies. In addition to re-establishing baseline conditions, CEC’s team of environmental engineers ensures mining facilities are designed for future sustainability.

- **Air Quality and Water Quality Assistance**: Metallurgical and air quality scientists perform modeling to predict impacts on human health and evaluate air quality and noise mitigation strategies for both short-term and long-term air and noise impacts. Air Quality and Water Quality assistance help mining companies meet environmental requirements mining companies are facing, allowing operators to focus on achieving maximum output and return on investment.
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