



Civil & Environmental Consultants, Inc.

# Environmental Engineering and Sciences

**CEC conducts environmental assessments, site investigation/remediation, and other general compliance auditing and support services.**

CEC provides environmental services for a wide range of industries and businesses, including power plants, mining facilities, waste processing facilities, oil & gas development and processing sites, industrial manufacturing sites, law firms, and real estate companies.

## **PHASE I & II ENVIRONMENTAL SITE ASSESSMENTS**

With a focus on proposed land use and a practical evaluation of likely exposure pathways, CEC conducts environmental site assessments of properties to identify environmental liabilities and determine if past or adjacent land uses have resulted in environmental impacts. Assessments are designed to meet industry standards, such as ASTM and AAI, as well as client-specific and state-mandated standards when regulatory closure is the ultimate goal.

## **SITE INVESTIGATIONS**

Site investigations are performed to evaluate whether impacts to environmental media are present or to further study the extent and degree of known impacts. CEC specializes in groundwater modeling; soil, waste and water sampling; human and ecological risk assessment; and regulatory negotiations.

## **SITE REMEDIATION AND BROWNFIELDS REDEVELOPMENT**

CEC has successfully transitioned dozens of idle industrial sites through the redevelopment/re-use process. Licensed professionals complete assessments and remediation, in many cases obtaining liability protections available through state voluntary remediation programs. CEC engineers and environmental specialists work together to provide practicable solutions that often allow for reuse of a property using limited engineering and institutional controls.

## **SITE REMEDIATION AND GROUNDWATER REMEDIATION**

CEC applies knowledge of groundwater flow, groundwater chemistry and contaminant transport to evaluate and design remedial alternatives for contamination problems. Capabilities include groundwater extraction and treatment using methods such as air stripping, steam stripping and carbon adsorption, as well as separate phase extraction of both light and dense freephase liquids. In-situ groundwater remediation experience includes chemical oxidation, natural and enhanced bioremediation, and phytoremediation. CEC is experienced with the physical manipulation of groundwater flow, including capture systems and physical barriers such as slurry walls, infiltration trenches and impermeable caps.

## **COMPLIANCE AUDITING AND REGULATORY COMPLIANCE/ LIABILITY RESERVE DEVELOPMENT SUPPORT SERVICES**

Compliance audits are designed to help prepare and implement cost-effective solutions and improve systems for maintaining and tracking regulatory compliance. Audits often include liability assessments and reserve estimates, and regulatory compliance assessments to support due diligence and acquisitions.





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## **COMPLIANCE SUPPORT – ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT SYSTEMS**

CEC assists with creation, implementation and ongoing support of Environmental Management Systems (EMS) and Occupational Health and Safety Management Systems (OHSMS). Services include: identifying EHS impact of activities, operations, processes, products and services; identifying and evaluating applicability of state, federal and local regulations; identifying responsibilities and resources for successful EMS or OHSMS implementation; and developing and auditing EMS/OHSMS programs.

## **COMPLIANCE SUPPORT – CLEAN WATER ACT (CWA)**

CEC assists clients across many market sectors with various CWA issues, including: NPDES individual discharge permit acquisition and renewal applications; NPDES stormwater and general permit acquisition and renewal applications; Storm Water Pollution Prevention Plan (SWPPP) preparation; routine Discharge Monitoring Report (DMR) completion and submittal; wastewater treatment plant design and upgrades to meet permit limits; and assistance with design/implementation of Best Management Practices (BMPs).

## **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)**

CEC assists clients in complying with RCRA obligations, including: waste characterization evaluations and support; waste management planning and evaluation of beneficial use/recycling opportunities; design of hazardous waste storage areas and containment buildings; implementation of weekly hazardous waste inspection programs; providing RCRA training for personnel involved with management of hazardous waste; preparation of facility RCRA Contingency Plans; completion of biennial hazardous waste reports; and completion of state residual waste (non-hazardous) biennial reports.

## **EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW (EPCRA)**

CEC assists clients in complying with annual filings of emergency and hazardous chemical inventory reports (Tier II) and Toxic Release Inventory (TRI) Reports (Form A/R). Services include: rule applicability and Tier II/Form R reporting threshold evaluations; review of safety and chemical data sheets for completeness; preparation of Tier II reports from chemical inventory information; and calculation of chemical releases and preparation of TRI Reports.

