



CIVIL ENGINEERING
 PROGRAM/PROJECT MANAGEMENT
 CONSTRUCTION/CONSTRUCTION MANAGEMENT
 COASTAL ENGINEERING
ENVIRONMENTAL SERVICES
 OIL & GAS SERVICES

ENVIRONMENTAL SERVICES

Royal's staff of experienced engineers and scientists has successfully developed many environmental compliance strategies for a wide variety of clients.

From restoring contaminated sites, to devising innovative solutions to complex environmental issues, Royal is a leader in environmental protection and remediation. Using our engineering, design, and construction expertise, we work with our clients to, develop sound compliance strategies, thoroughly investigate media of concern, and remediate contamination and restore land to a usable state. Royal's staff of experienced engineers and scientists has successfully developed many environmental compliance strategies for a wide variety of clients including commercial, industrial, and government. We have conducted hundreds of site selection, characterization, evaluation, and monitoring studies, performed cleanup of hazardous and toxic waste, and have provided management consulting services; prepared environmental permit applications, compliance documents, and impact assessments for hundreds of projects. Ultimately, Royal develops remedial solutions that give our clients a competitive advantage in specific markets. Our solutions combine proven engineering services with forward thinking and innovative technologies. Our ability to provide environmental engineering services for a wide variety of tasks ensures strong technical support throughout all phases of the project. Our clients benefit from cost-effective, timely solutions that balance economic resources to environmental challenges.



Our Environmental Services and Experience includes:

⌘ Regulatory Compliance

- ⌘ Permitting (NPDES, CWA 404, CAA, SDWA, Solid Waste, RCRA, UIC)
- ⌘ Regulatory Agency Coordination
- ⌘ Pollution Prevention Plans (SPCC, SWP3, BMP)
- ⌘ Storage Tank Management (UST, AST)
- ⌘ National Environmental Policy Act (NEPA) Environmental Assessments
- ⌘ Wetland Delineations
- ⌘ Energy Monitoring and Reduction

⌘ Litigation Support Services

⌘ Environmental Investigation

- ⌘ Phase I & II Environmental Site Assessments
- ⌘ Geological and Hydrogeological Investigations
- ⌘ Asbestos, Lead-based Paint, Hazardous Building Materials

⌘ Remediation and Restoration Services

- ⌘ Modeling (surface water, groundwater, contaminant fate and transport)
- ⌘ In-situ and Ex-situ Remediation

CORPORATE HEADQUARTERS ADDITIONAL LOCATIONS

601 Elysian Fields Avenue
 New Orleans, Louisiana 70117
 Phone: 504.309.4129
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- ⌘ New Orleans, Louisiana
- ⌘ Cameron, Louisiana
- ⌘ St. Bernard Parish, Louisiana
- ⌘ Lafayette, Louisiana
- ⌘ Houston, Texas
- ⌘ Mobile, Alabama

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ROYAL DIVISIONS

Client: Ambling University Development Group

Location: Lafayette, Louisiana

Project Type: Environmental Site Assessment, Asbestos Testing, Inspection Services, Regulatory Compliance



Royal recently completed a Phase I Environmental Site Assessment (ESA) of nine buildings and approximately 14 acres of property located on the University of Louisiana – Lafayette campus. Results of the Phase I ESA indicated the need for completing Asbestos Containing Materials (ACM) inspections of the nine buildings in accordance with state regulation (LA 1527) and federal worker protection requirements (OSHA 29 CFR 1926.1101). Royal collected building material bulk samples from the nine buildings were submitted for analysis for asbestos by an accredited by the National Institute for Standards technology (NIST) laboratory. Bulk samples were analyzed by polarizing light microscopy (PLM) methods using the “Method for Determination of Asbestos in Bulk Building Materials,” (EPA/600/R.93/116 methodology). A total of 300 bulk samples were submitted for analysis with 350 laboratory results provided. Additionally, lead-based products were identified in all buildings. Four of the campus buildings were further evaluated for mold concentrations as well. Mold was identified in all buildings and recommendations made for remediation of all conditions responsible for mold growth. The investigation identified potentially harmful constituents in order to prevent them from entering the environment during renovation and demolition.

Environmental Permitting and Compliance, USACE, Contreas Dirt Pit

Client: Contreas Dirt Enterprises

Location: St. Bernard Parish, Louisiana

Project Type: Geotechnical Analysis, Sampling & Analysis, Surface Water Quality, NEPA, CWA, CAA



To identify potential environmental risks Royal conducted a Phase I Environmental Assessment. The Phase I EA included a critical visual inspection of the sites for recognizable environmental conditions and review of historical records to ascertain if any hazardous material were present. Royal also worked with USFWS to insure the project did not affect threatened or endangered species protected by Endangered Species Act. Since the project area was within the Coastal Zone, local and state permits were acquired and a Wetland Determination was conducted to verify if any part of the project was subject to Corps' jurisdiction. An Air Emission permit was also required for this facility. Emissions calculations were performed (PM10, SO2, NPx, CO and VOC) for issuance of a minor source emissions permit that proposed a design scheme capable of controlling the emissions to the type and quantities stated. Lastly, Royal was responsible for development and maintenance of the Storm water Pollution Prevention Plan (SWPPP), Spill Prevention Control & Countermeasure Plan (SPCC) and Water Discharge permitting and Compliance.

Energy Use, Monitoring and Reduction Project

Client: US Army Corps of Engineers, Ft. Worth District

Location: Fort Hood, Texas

Project Type: Energy Use Monitoring, Data Collection & Management, GIS System Integration, Troubleshooting & Quality Control



Fort Hood has an average energy bill in excess of \$40M annually and has in excess of 80,000 energy users on post, including tenant units and organizations who occupy a broad range of facility types. Federal energy policy and executive orders (EO#13423 and EO#13514) require Fort Hood to reduce their energy use by metering energy consumption at the individual building level and establishing a baseline use and energy reduction goals. To assist Fort Hood, Royal is currently providing professional services to upgrade the Comprehensive Army Master Planning System (CAMPS) software to incorporate GIS and sustainability management capabilities. Users are currently able to view facility-related data such as tenants, building type and size, year built and quality rating in both a tabular and map format. The inclusion of the metered electric, water, and gas use information to the evaluation criteria will allow for a more comprehensive energy use analysis and a comparison of occupant requirements. Anticipated benefits of this energy use and reduction project include education and behavioral modifications by users anticipated to result in a 15% or more annual energy cost savings to the fort.