CEDAR CREEK ENGINEERING INC

Pure Science for Clean Water®

PAUL RODGERS, PE

Certifications: Registered Professional Engineer – Kentucky, Florida, Texas, Montana, Pennsylvania

Class I Wastewater Treatment Plant Operator - Kentucky
Certified Contractor, Kentucky Petroleum Storage Tank Fund
DOT/HM -126F, Hazardous Materials Transportation Certified
OSHA 1910.120 Certifications: 40-Hour Hazardous Waste Operations
8-Hour Supervisory
Confined Space Entry
Excavation and Trenching Competent Person

Education: M.S. Chemical Engineering
University of Kentucky, Lexington, 2001

B.S. Civil Engineering
California Polytechnic State University, San Luis Obispo, 1985

Experience:

1995 - Present Principal Engineer - *Cedar Creek Engineering, Inc*.

Owner and principal engineer of Cedar Creek Engineering, Inc., an environmental engineering firm specialized in soil and groundwater remediation and wastewater treatment.

Expert in soil and groundwater chemistry, contaminant transport and equilibrium, and in-situ remediation technologies.

Developer and provider of chemical oxidation technologies for destruction of organic compounds in soil and groundwater.

Provider of wastewater treatment system designs, installation, operation and maintenance, and stormwater pollution control engineering services.

1988 - 1995 Project Engineer, Operations Manager - *Groundwater Technology, Inc.*

Established and managed district office for national environmental consulting firm. Led a staff of geologists, engineers and technicians in remediation projects in Kentucky, Indiana and West Virginia.

1985 - 1988 Water Resources Engineer - *US Peace Corps, Nepal*

Water resources engineer for Remote Area Development Committee, Kathmandu, Nepal. Designed and constructed irrigation canal in Far West Region.

Community:

Vice Chairman – Winchester Municipal Utilities Commission
MATHCOUNTS Coach, Clark Middle School (2003 – present)
Junior Achievement Volunteer (2002 – present)
Clark County Chamber of Commerce, Community Services Committee

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Specific Skills and Experience:

Research and Development — Completed original research in the development of technologies related to Fenton's reagent for soil and groundwater remediation. Developed a standardized method for measurement of natural oxidant demand in soils utilizing potassium permanganate. Optimized formulation of Fenton's reagent for precipitation of arsenic in groundwater. Completed remediation by chemical oxidation at dozens of sites throughout the U.S.

Groundwater Contaminant Transport Modeling — Expert in contaminant transport modeling to predict future impacts, assess health risks and support remedial approaches. Proficient in both numerical and analytical methods for solution of 3-D mass transport problems. Skilled in writing and solving differential equations and boundary value problems for groundwater contamination.

Statistics — Competent in use of statistical analyses, including Monte Carlo simulations and analysis of variance to support decision-making. Developed statistical inventory reconciliation program for local oil company's leak detection program. Developed numerous t-test based analyses of contaminated sites to define cleanup target levels.

Groundwater monitoring — Created monitoring program for major oil company involving more than 700 groundwater wells at 125 service stations throughout Kentucky. Organized and directed personnel and equipment to maximize efficiency in sample collection, analysis and reporting, creating new process for rapid translation of raw data to final graphic and text forms. Developed screening system for prioritization of remedial actions based on objective analysis of contamination trends and risk of off-site impacts.

Remediation assessment — Directed field technicians, laboratory personnel and technical report writers in the collection, analysis and reporting of more than 7,000 soil samples from locations from Louisiana to West Virginia in a period of 90 days for natural gas pipeline company.

Constructed Wetlands — Designed constructed wetlands for the treatment of contaminated groundwater and industrial wastewater. Developed plans for wetlands-based phytoremediation of RDX, including a kinetic model to describe denitrification of contaminants.

Information Technology — Skilled in word processing, spreadsheets, relational database management. Proficient in MathCAD, AutoCAD, Visual Basic, project management and chemical process modeling software. Competent in HTML programming and management of Microsoft local area networks. Developed underground storage tank database and on-line leak detection program for petroleum marketer.

Teaching — Substitute math and science teacher in Clark County, Kentucky public school system. MathCounts Coach, Clark Middle School.

Affiliations:

American Society of Civil Engineers
American Chemical Society
National Groundwater Association
Interstate Technology Regulatory Council – ISCO Team Member
American Water Works Association