

BRICK SMITH, P.E.

SENIOR PROJECT ENGINEER/SENIOR PROJECT MANAGER

PARAGON

PROFESSIONAL EXPERIENCE

Mr. Smith is a founding member of Paragon Consulting Group. He is a senior project engineer/senior project manager in the firm. He is responsible for conducting site assessments, performing remedial investigations, preparing feasibility studies, developing groundwater models, analyzing water quality, and designing remediation systems. He has managed construction observation and implementation of corrective action plans including free-phase product removal, groundwater recovery, soil vapor extraction, air sparging, and bioremediation.

Mr. Smith has extensive experience working with Concentrated Animal Feeding Operations (CAFOs) in Colorado. That experience includes hydrologic assessment, lagoon design, surface and groundwater protection, manure and wastewater management plans, nutrient management plans, facility management plans; CAFO discharge permitting; annual reporting preparation; regulatory compliance and interfacing with regulators.

Mr. Smith has worked as a project engineer and project manager on sites involving underground/aboveground storage tanks (USTs)(ASTs), dry-cleaners, and industrial sites. His work includes assessment and remediation of these projects. He was responsible for tasks including:

- Development of drilling and sampling plans;
- Development of soil vapor survey plans;
- Geohydrologic characterization and groundwater modeling;
- Regulatory contact and preparation of required closure, assessment and corrective action reports;
- Selection, design and specifications for remediation systems;
- Design of groundwater monitoring, soil vapor extraction, sparge systems, ORC systems and recovery systems;
- Preparation of cost estimates and technical feasibility studies;
- Soil excavation and soil-treatment design;
- In-situ injections for remediation enhancement;
- Permitting for air emissions, water disposal and soil disposal;
- Remediation project construction management and quality control; and,
- Reimbursement Application preparation and review.

Mr. Smith has coordinated several Voluntary Cleanup (VCUP) sites in Colorado involving the assessment and remediation of metals, petroleum hydrocarbons and volatile organic compounds (VOCs). He was also a member of the Colorado ad-hoc committee for developing groundwater assessment and monitoring requirements at landfills and provided services for a Colorado Landfill.

EDUCATION

*Master of Science, Environmental Engineering,
1989, Colorado School of Mines.*

*Bachelor of Science, Petroleum Engineering,
1985, Colorado School of Mines.*

REGISTRATION

Professional Engineer, Colorado and Wyoming

*Recognized Environmental Professional,
Colorado*

AFFILIATIONS

American Water Resources Association

National Groundwater Association.

WORK HISTORY

*Paragon Consulting Group, Inc., Senior Project
Engineer & Senior Project Manager, 1997 -
present.*

*Terracon Environmental, Inc., Senior Project
Engineer, 1994 - 1997, Project Engineer 1989-
1994.*

*ERO Resource Corporation Research Associate,
1988 - 1989.*

*Colorado School of Mines, Teaching Assistant,
1988 - 1989.*

*Colorado School of Mines, Research Assistant
1987 - 1989.*

*U.S. Geological Survey, Physical Science
Technician, 1986-1987.*

SELECTED ADDITIONAL COURSES

Groundwater Statistics for Environmental Project Managers – Interstate Technology & Regulatory Council, Internet Training Course , January 23, 2018.

Effective Corrective Action Plan Preparation Course – Colorado Division of Oil and Public Safety, September 28, 2017.

Water Fluency – Colorado Foundation for Water Education Spring March through May 2016.

Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation and Management. - Interstate Technology & Regulatory Council - Web Seminar May 2016.

Light, Non-aqueous Phase Liquids: Science, Management and Technology - Interstate Technology & Regulatory Council, April 2015.

Remediation Workshop - Soil and Groundwater Remediation Technology Lecture Series February 2014.

Colorado Department of Public Health and Environment (CDPHE) Ag Program Annual Outreach - February 2011, 2012, 2013, 2014, 2015, 2017, 2018.

Outreach Program – Colorado Department of Labor and Employment, Oil and Public Safety, 2013.

Introduction to Aquatic Toxicology - Northwest Environmental Training Center August 10-11, 2010.

Poster Presenter – Enhanced Reductive Dechlorination Results from Successful Pilot and Full Scale HRC ® Application - Battelle Convention: Remediation of Chlorinated and Recalcitrant Compounds, May 19-22, 2008.

2002 SPCCP Rule, USEPA Region 8 Oil Program, Denver, Colorado; February 2006.

Methyl Tertiary Butyl Ether Regulation, Training/ Outreach Program – Colorado Department of Labor and Employment, Oil and Public Safety, August 2005.

MTBE & TBA: Comprehensive Site Assessment and Successful Groundwater Remediation, ITRC Training, Denver, Colorado December 2004.

Remediation Economic Feasibility Summary (EFS) and Monitored Natural Attenuation in Groundwater (MNA) Training/ Outreach Program – Colorado Department of Labor and Employment, Oil and Public Safety, November 2003.

Principles and Practices of Forced Air Remediation, National Groundwater Association, Denver, Colorado, February 2001.

Risk-Based Corrective Action - Colorado Department of Labor and Employment, Oil Inspection Section Seminar, Denver, Colorado, February 1999.

Design of Air-based Remedial Systems - University of Madison, Wisconsin, Cheyenne, Wyoming, August 1996.

ASFE Loss Prevention Seminar, Denver, Colorado, February 1994.

USEPA Wellhead Protection Short Course, International Groundwater Modeling Center, Colorado School of Mines, Golden, Colorado, November 1993.

USEPA Bioremediation of Hazardous Waste Sites: Practical Approaches to Implementation, Denver, Colorado, June 1993.

ASTM Standard for Phase I Environmental Assessments, Colorado School of Mines, Golden, Colorado, January 1993.

OSHA 40-Hour Hazardous Materials Certification.

AHERA - Asbestos Inspector Certification (inactive).

SELECTED PUBLICATIONS/PRESENTATIONS

Phosphorus Retention Functions and Interactions at the Chatfield Arboretum Wetlands, Master's Thesis, Colorado School of Mines, Golden, Colorado June 15, 1989, Smith, B.

First Annual Report: Chatfield Arboretum Wetland Creation Project 1987, Report to the Colorado Department of Transportation from the Department of Environmental Sciences and Engineering Ecology, 1988, Colorado School of Mines, Golden, Colorado, Cooper, D.J. and Smith, B.

Second Annual Report - 1988: The Success of wetland Creation at the Chatfield Arboretum, Annual Report for Year 2, Report to the Colorado Department of Transportation from the Department of Environmental Sciences and Engineering Ecology, Colorado School of Mines, Golden, Colorado, 1989, Cooper, D.J. and Smith, B.

Confined Animal Feeding Regulations, Western Dairymen's Journal, January-February 1994, Smith, B. and Wohlgemuth, S.K.

Poster – Enhanced Reductive Dechlorination Results from Successful Pilot and Full Scale HRC ® Application - Battelle Convention Remediation of Chlorinated and Recalcitrant Compounds, May 19-22, 2008, Smith, B. and Rau D.M.

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