

## David L. Russell, P.E.

### EDUCATION:

\*University of Illinois, Urbana, BSCE, 1966

\*West Virginia University, Morgantown, MSCE, 1967

\*Additional Graduate School Work: SUNY at Buffalo, Work on MSChE, 1982-1983.

\*Faculty Instructor Environmental Engineering, College of Civil Technology, Southern Technical Institute, Marietta, Georgia, 1986-1989.

Instructor: American Institute of Chemical Engineers, Courses: Practical Wastewater Treatment and Hazardous Materials & Hazardous Wastes

### PROFESSIONAL:

Who's Who in Engineering, 1995 to date

\*Registered Professional Engineer: Pennsylvania, and Georgia, Arizona, Kansas, and TN (inactive)

American Institute of Chemical Engineers

Atlanta Chapter, American Institute of Chemical Engineers Treasurer 1998-2011

Past Chairman, 2008-2010

Water Environment Federation

\*Member, Water Pollution Control Federation since 1975

\*Member Editorial Advisory Board – Industrial Wastes Magazine

Member Program Committee – Industrial Wastes, and Groundwater Committees since 1990

Chairman Pollution Prevention Committee 1999-2001

Chaired, organized and ran a number of pre-conference seminars on various technical topics related to Petroleum Pipelines, Petroleum Refineries, and pollution control .

Chairman Groundwater Committee 1999-2003

\*Chapter Author, WPCF Manuals of Practice on Hazardous Waste Site Remediation, Municipal Operations (Safety), and Industrial Waste Treatment Practice (Wastewater Sampling)

\*Book: "Remediation of Petroleum Contaminated Sites," Technomic Press, 1992

\*Book: "Practical Wastewater Treatment" John Wiley Press, 2006; Chinese Edition, 2011

\*Book: "Remediation Manual for Contaminated Sites", CRC Press/Taylor and Francis Press, October 2011

\*Instructor: Environmental Institute- 1992-1998

Helped found the program for Environmental Assessments in 1992

Lectured on Pesticides, Hazardous Materials and Hazardous Wastes, Safety, Underground Storage Tanks, Above Ground Storage Tanks, Air Pollution and Ethics of Environmental Assessment

Guest Lecturer, NATO Advanced Study Institute, Zhomtyr Ukraine, August, 2005

Guest Lecturer and Researcher – Polish Central Mining Institute, Katowice, Poland, researching Radium Removal from Groundwater- 2007

Guest Lecturer, NATO Advanced Scientific Institute- Ecoterrorism Lectures and Responses- Venice, Italy, July 1-4, 2007

Research Associate/ Lecturer/ Principal Investigator- 3 months 2007-08: Central Mining Institute, Katowice, Poland: "Method for Removing Radium from Mining Waters," Sponsored by EU WaterNORM grant.

Lecturer: Haward Middle East Institute, Abu Dhabi, UAE. Courses on Water Supply, Security, Terrorism, Environmental Control, ISO 14000, Oily Water Management, Establishing and Running a Security Force, and other subjects: 2008- 2010  
"Rethinking Sustainability- The Technology Factor", at the 8<sup>th</sup> International Phytoremediation Conference, Parma, Italy, September 28, 2010,

### **List of Definition Missions and Studies Completed for TDA**

Note: Dates are approximate

DM Ghana LPG Study- 1993

DM Venezuela Oil and Environmental Projects, 1996

DM Venezuela Equipment and Facility Projects for PDVSA 1997

DM Venezuela Evaluation of Petrochemical facilities in Zulia State Refinery 1999

Desk Study – Evaluation of Cleanup of Contamination from Chernobyl – date

Approximate 1989

DM Romanian Chemical Industry- 1994

Desk Study of Belarus Cleanup from Chernobyl disaster, 1992

Desk Study – Wyala of Fees Morocco – Landfill project 2002

DM Venezuela- Evaluation of Oil and Gas Pipeline Projects on Lake Maricaibo (Date Approximate – 2002)

### **Training and Instructional Courses Taught (2009 to Date)**

Security and Terrorism to ARAMCO (Saudi Arabia) and GPIC (Bahrain)

Water Supply System Security to Dubai Water and Power

Water Distribution System Modeling to Abu Dhabi Distribution Company

Certified Radiation Supervisor/ Radiation Safety Officer (public course) in Abu Dhabi

Chemical Engineering for Non Chemical Engineers to Occidental Petroleum Operators and supervisors (Damam)

Hazardous Materials, Hazardous Materials Movement and Hazardous Wastes in Kuala Lumpur, Malaysia and in Abu Dhabi, UAE for petroleum and aluminum companies

Emergency Management and Emergency Response for various companies

HAZWOPER and HAZCOM for various companies

Oily Water Treatment for various petroleum companies in the Middle East

Risk Assessment and Management to Undergraduate Students in Lublin, Poland

### **WORK HISTORY:**

\*1986- DATE:

*Global Environmental Operations, Inc.*, Lilburn, Georgia

(Corporate and industrial chemical and environmental engineering and consulting).

Global Environmental Operations, Inc. (GEO) was developed as an outgrowth of corporate consulting which Mr. Russell has been performing for clients. GEO is truly worldwide, in that it has performed consulting for organizations in Ghana (Africa), Germany, Romania, and Hungary. GEO also has clients of all sizes all over the United States. These clients are industries and other consulting firms. GEO is a full service industrial consulting firm which has capabilities in air pollution, water pollution, and solid and hazardous waste control as well as process engineering. Mr. Russell has recently provided technical advice to a group of insurance companies on processes involving the manufacture of explosives and the resultant environmental contamination. Some of the other recent areas of activity have included radioactive waste remediation activities in Richland, Washington; preparation of strategic response plans and remediation plans for bulk petroleum terminals; specialty remediation projects on petroleum and organic hazardous wastes contaminated sites, and expert witness and legal support activities. Mr. Russell is familiar with all aspects of chemical plant, petroleum and agricultural chemicals plants and their environmental challenges, including hazardous wastes work and regulatory cleanups. He has written extensively on subjects dealing with environmental control in the chemical and petroleum industries, and articles on hazardous wastes management, property transfer liabilities and assessments, and on a number of other environmental topics. Mr. Russell has also provided consulting services to a number of other large engineering firms, in environmental and specialty areas relating to cleanups and waste management.

He was involved in the Lawsuit filed by the Lago Agrico Plaintiffs against Chevron alleging massive contamination of the Oriente Region of Ecuador, and founded and led the investigation team to find that contamination. When the contamination was not found, he informed the plaintiffs that the alleged contamination did not exist. He later served as a witness for Chevron in Federal Court where he provided sworn testimony indicating that the original Plaintiff's outrageous claims were unfounded, and that the contamination existing in Ecuador was as a result of PetroEcuador's drilling and operating practices..

He has been involved with a major soft drink manufacturing company in Eastern Europe and has conducted environmental audits of their facility and supervised environmental audits for new acquisitions.

He has performed groundwater monitoring and remedial investigations, RCRA (Hazardous Waste) audits, solidification studies, waste minimization studies, and SARA environmental release notifications for a wide variety of clients, including industrial and commercial firms. He has also been involved in permitting a new incinerator site in Georgia, and has prepared comprehensive environmental evaluations for two refineries in Hungary on a subcontract as part of an Agency For International Development Trade Definition Program team. He has also prepared studies of portions of the chlorinated organic chemical industry (pesticides, solvents, dyes etc) in Romania, and has advised Romanian companies about environmental compliance and cleanup.

Mr. Russell has also been extremely active in dealing with infrastructure issues in working with commercial and industrial clients to develop new facilities, with schools to

deal with rehabilitation of utilities, and with other commercial establishments to help them manage and repair their infrastructure needs including water systems and sewers, and waste water treatment facilities.

He provided research and testimony for a number of legal clients involving different and complex issues. A number of these issues involved legal and physical research for accident investigation and reconstruction. In New York, he provided consulting for evaluation of construction liability in the Hudson River when a barge grounded due to a missed benchmark elevation on construction of piling which was protecting a critical pipeline. This led to favorable settlement.

In New Jersey, he turned a construction management failure case around by identifying contributory negligence on the part of a third party which proved that the Plaintiff's damage from flooding was caused by the NJ DOT's traffic management activities.

He has evaluated critical failures in any number of chemical and physical plants and provided analysis and trouble-shooting to get processes to return to their correct and environmentally compliant operations. Many of these involved analysis of physical problems and rectification or replacement of equipment.

He has prepared environmental disclosures for USEPA Regions II, III, IV, and V to help protect a client from liability and start an investigation for a complex environmental fraud case against a major manufacturer.

In 2007-2008 he spent three months in Poland working with the Central Mining Institute in Katowice, on an EU Grant under their WaterNORM project. The research topic was to find a way to remove Radium (and other radioactive materials) from the highly saline groundwater generated by the Polish Coal Mines.

He has also provided a new disinfection system for Hercules, Inc. Savannah, Plant.

In 2008-2014 he has been providing training services for a number of clients in the Middle East. His principal areas of lecture include safety and security, root cause analysis and fault tree analysis, Risk Analysis and setting up Risk Tables, and security and wastewater treatment for various clients. He has taught courses for DuBai Water and Power, a variety of oil companies (oily water treatment), Hazardous Wastes Treatment and handling, and Security, Safety and Risk Assessment for Aramco, and other companies, and a number of process and engineering courses for the Petroleum Industry in the Middle East, including Hazmat, Oily Water Treatment, Refinery Wastewater Treatment, Process Troubleshooting, Chemical Engineering for non-engineers, and management and analyses courses on operations and management subjects.

**\*1985-1986**

**LAW ENVIRONMENTAL SERVICES, MARIETTA, GEORGIA.**

PROCESS ENGINEER, (groundwater and wastewater, process design, environmental audits, remediation).

**\*1984-1985**

**LOCKWOOD GREENE ENGINEERS, ATLANTA, GEORGIA.**

PROJECT MANAGER, (Solid and hazardous waste business development).

**\*1981-1984**

***SELF-EMPLOYED***, WILLIAMSVILLE, NEW YORK.

CONSULTING ENGINEER, (chemical process, wire and cable, rubber and other manufacturing industries).

**\*1979-1981**

***HOOKER CHEMICALS***, NIAGARA FALLS, NEW YORK

ENVIRONMENTAL MANAGER (water pollution control programs, agricultural chemicals).

**\*1977-1979**

***ALLIED CHEMICAL***, MARCUS HOOK, PENNSYLVANIA

SENIOR ENVIRONMENTAL ENGINEER, (Division Staff for phenol, pesticide, specialty chemical and agricultural chemical plants- solving plant environmental problems ).

**\*1975-1977**

***IMC CHEMICAL CO.***, TERRE HAUTE, INDIANA

ACTING ENVIRONMENTAL MANAGER, (Nitro-paraffins, explosives manufacturing and agricultural chemicals).

**\*1971-1975**

***MERIDIAN ENGINEERING***, PHILADELPHIA, PENNSYLVANIA

CIVIL and CHEMICAL - ENVIRONMENTAL ENGINEER, (municipal and industrial water and wastewater treatment, treatment plant design, project management).

**1969-1971**

***BUCHART-HORN ENGINEERS***, LEWISBURG, PENNSYLVANIA

CIVIL ENGINEERING Wastewater Treatment Plant design and rehabilitation, and air pollution work for municipalities and industry

**1967-1971**

***VARIOUS CONSULTANTS***, WASHINGTON, DC

CIVIL Engineering and air pollution engineering for two consultants in the Washington DC area. Working on municipal wastewater treatment designs, and on air pollution stack testing and consulting.

## **PUBLICATIONS and Other Work**

### **Books:**

Remediation Manual for Petroleum Contaminated Sites, Technomic Press (Now Francis and Taylor/CRC Press), 1992

Practical Wastewater Treatment, John Wiley, New York, 2006

Remediation Manual for Contaminated Sites CRC Press, published fall, 2011

### **In Chemical Engineering Magazine:**

"Understanding Groundwater Monitoring", October, 1987

"Underground Storage Tanks... Potential for Economic Disaster", with Steven Hart, Mar.1987.

"Managing your Environmental Audit", June, 1985.

"Monitoring and Sampling Liquid Effluents", October, 1980

"Measurement Uncertainties in the NPDES Permit System', with J. Tiede, October, 1978.

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**In Purdue Industrial Waste Conference:**

"Design of an Enclosed Composting Reactor", 1985.

"Thermal Sludge Drying... Drum Dryer Systems", 1985

"Now You See It...", 1978

**Other Publications:**

Occasional contributing author to Environmental Protection Magazine and Atlanta Realtor, Magazine 1987-1992

Water Environment Federation Manual of Practice: Chapter author for "Emergency Response" and "Safety", 1995

"Minimizing Adverse Effects of Military Decontamination," presented at the NATO Scientific Conference on Military Decontamination, Bucharest, Romania, October, 1998

"Case History: Comparison of Soil Vapor Extraction and Conventional Geotechnical Survey Methods," with Lee Staska and Mark Mow, GA Water Environment Conference, March, 1995, Atlanta, GA.

Principal contributing author to "Evaluation of Alternative Drilling Technologies and Subsurface Confinement Barriers for Single Shell Tanks at Hanford, Phase I ." report for DOE.

"An American Perspective on Cleanup of Petroleum Contamination." Bucharest, Romania, for Romanian Petroleum Industry with , Ion Petre, .

US Asia-Environmental Partnership Lecturer for Envirovison –2001, Bombay, Ahamedabad, Hyderabad, Delhi, and Bangalore, India – June 2001 Lectures on Hazardous Wastes, Remediation, and US Environmental Practice

Articles and lectures on Wastewater treatment modeling and monitoring

Instructor for the American Institute of Chemical Engineers: Environmental Engineering, and Hazardous Wastes

Ecuador: Principal Investigator for Aguinda vs. Texaco regarding the contamination of the Oriente, Lago Agrio, Ecuador by Texaco's Petroleum Operations in Ecuador.

Instructor for NATO Advanced Study Institute, Advanced Science and Technology for Sites Contaminated with Chemical and Radiological Nuclear Agents; papers on "Remediation on High Toxicity Sites", and Practical Lessons from the Wastewater Field", August, 2005.

Modern Pumping Today (Highlands Press, Birminham AL.) Articles on Hydraulic Transients (Water Hammer), and Uniform Distribution in Piping Networks, and a current series on the accuracy of head loss estimates in piping: Moody Diagrams vs. Colebrook C factors. In issues from April- July, 2014.

**Recent Projects:**

Presentation for Georgia Geologic Society, 2012, Design of a Horizontal Well Remediation System, Marietta, GA

Hampton Industries: Obtained relief from Stop Sale Order under FIFRA, (August, 2013)

Karen Bufford, (Modeling Study for air impacts of Goddard College Boiler System), August 2013

Legal Investigation of Groundwater Contamination by Trojan Powder/ IMC/ Mallinkrodt Chemical in Springville, UT (completed 2013)

Several Phase I investigations on commercial properties in and around Atlanta, GA where groundwater contamination was a concern.