

Ricky C. Clift, Ph.D., P.E., F. ASCE



Professor of Civil and Environmental Engineering
College of Engineering
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PERSONAL DATA

Birthdate: August 31, 1950 Citizenship: United States
Marital Status: Married to Denise Clift Children: One, Eric A. Clift
Military: Arkansas Army National Guard (1970-74), Texas Army National Guard (1974-76)
Residence States: Arkansas (1950-53, 1964-74, 1980-present), Missouri (1953-63), Illinois (1963-64), and Texas (1974-79)

EDUCATION

Doctor of Philosophy in Engineering University of Houston, Houston, TX - 1980
Master of Science in Civil Engineering University of Arkansas, Fayetteville, AR - 1974
Bachelor of Science in Civil Engineering University of Arkansas, Fayetteville, AR - 1973

LICENSES AND SPECIALTY CERTIFICATIONS

Professional Engineer - Arkansas No. 4977, Licensed by Reciprocity, 1979-Present
Texas No. 42969, Licensed by National Examination, 1978-1996
UST Licensed Contractor - Arkansas Department of Pollution Control & Ecology, Regulated
Storage Tank Division (Install, Repair, Upgrade & Close), Arkansas No. 037, 1990-2000
Arkansas Contractors License (Building, Municipal/Utility, USTs), Licensed Individual for C&D
Environmental Services, Inc., 1992-2000
Hazardous Waste Operator/Emergency Response, 40-hour OSHA Training Certification, Waste
Services, Inc., 1992, Annual OSHA HazWaste Refresher Course, Waste Services, Inc. and
C&D Environmental Services, Inc., 1993-2000
Hazardous Materials Handling Certification, Department of Transportation, 49CFR Transportation
Regulations, 1997 & 2000
Standard First Aid & Adult CPR, Waste Services, Inc., 1992-94, American Red Cross, 1996-2000
OSHA Lockout/Tagout Training, Waste Services, Inc., 1992-94, Petcon, Inc., 1998
OSHA Excavation Responsible Party/Supervisor Training, Petcon, Inc., 1998

PATENTS

Clift, R. C. and M. T. Garrett, *Oxygen Controlling Wastewater Treatment System*, United States Patent No.4,846,965, Issued July 11, 1989

Clift, R. C. and M. T. Garrett, *Oxygen Controlling Wastewater Treatment Method*, United States Patent No.4,898,672, Issued February 6, 1990

HONORS AND APPOINTMENTS

BSCE with High Honors, University of Arkansas, 1973

1982 Young Engineer of the Year in Arkansas, Arkansas Society of Professional Engineers

Arkansas Wastewater Licensing Committee, Appointed by Director, ADPCE, 1982-84

President's Fellow, Arkansas State University, 1983-84

Arkansas Technical Education Review Commission, Appointed by Governor Clinton, 1983-86

Technical Advisory Committee, Jonesboro Landfill, Appointed by Mayor Stallings, 1984

Governor's Workshop on Economic Development, Appointed by Governor Clinton, 1985

NE Arkansas Regional Solid Waste Authority, Appointed by Mayor Stallings, 1985-98

Commission on Jobs for Arkansas' Future, Appointed by Governor Clinton, 1985-86

Arkansas Academy of Civil Engineering, University of Arkansas, 1997

Faculty Advisor Award for ASU Student Chapter, American Society of Civil Engineers, 2000

Lt. Colonel Barney Smith Professor of the Year, ASU Student Government Association, 2002-03

American Society of Civil Engineers, National Fellow, 2005

PROFESSIONAL ORGANIZATIONS AND SERVICE

Tau Beta Pi National Engineering Honorary Fraternity, member, 1972

Chi Epsilon Civil Engineering Honorary Fraternity, member, 1973-present

Arkansas Society of Professional Engineers - East Chapter, member 1980-91

Vice President, 1983-84

President, 1984-85

State Board of Directors, 1985-87

Career Awareness Seminar, 1986

MathCounts Competitions, 1987-91

Junior Engineering Technical Society, nonmember

National Engineering Aptitude Search Exam at ASU, 1983-89

National Society of Professional Engineers, member, 1980-91

American Water Works Association, member, 1973-1988

Water Environment Federation, member, 1976-present

Arkansas Water Works and Pollution Control Association, member, 1976-present

International Water Quality Association, member, 1980-1992

American Society of Civil Engineers, member: 1985-2004, fellow: 2005-present

Technical Activities Committee - Arkansas Section, 1986

State Board of Directors, 1987-91

Arkansas Earthquake Response Team, 1990-91

Obtained Charter for ASU Student Chapter of ASCE, 1991

Engineering Accreditation Commission of ABET, Program Evaluator, 2005-present
Mississippi State University, Civil Engineering Program, 2005
Carroll College, Civil Engineering Program, 2006
University of Idaho, Civil Engineering Program, 2007
United States Military Academy, Civil Engineering Program, 2008
Northeast Arkansas Environmental Association, member, 1992-98
American Society for Engineering Education, member, 2003-present
Arkansas State Board of Professional Engineers and Land Surveyors, nonmember
Hosted Board Meetings on ASU Campus, 2002, 2004 & 2006
Northeast Arkansas Existing Industries Association, member, 2003-present

ACADEMIC EXPERIENCE

Arkansas State University, Positions

Program Director, Master of Engineering Management, May 2008-present
Associate Dean, College of Engineering, July 2005-August 2009
Interim Dean, College of Engineering, September 2002 to June 2005
Director of Engineering Programs, August 2000 to January 2003
Professor of Civil and Environmental Engineering, August 1991 to Present
Associate Professor of Civil and Environmental Engineering, August 1983 to May 1991
Assistant Professor of Civil and Environmental Engineering, January 1980 to May 1983

University of Houston, Graduate Research and Teaching Assistant for Dr. John F. Andrews, NSF Sponsored Research on Modeling the Activated Sludge Process, Environmental Engineering Ph.D. Program, 1975-1979

University of Arkansas, Graduate Assistant for Dr. James Moore, City of Fayetteville Sponsored Assistantship, Routine Sampling and Laboratory Work for the City of Fayetteville Water Works, Civil Engineering MS Program, 1973-74

Arkansas State University, Courses Taught

AGEN 1113 – Engineering Analysis	ENGR 1403 – Engr. Computer Solutions
AGEN 3113 – Soil and Water Engineering	ENGR 2403 – Statics
CE 3213 – Structural Analysis I	ENGR 2411 – Lab for Mechanics of Mat'l
CE 3223 – Civil Engineering Materials	ENGR 2413 – Mechanics of Materials
CE 3233 – Structural Analysis II	ENGR 3413 – Introduction to Design
CE 3253 – Engineering Hydrology	ENGR 3433 – Engineering Economics
CE 3263 – Environmental Engineering	ENGR 3473 – Fluid Mechanics
CE 3273 – Water and Waste Systems	ENGR 3493 – Engineering Internship
CE 4243 – Reinforced Concrete Design	ENGR 4473 – Senior Design Practicum
CE 4263 – Water and Waste Treatment	ENGR 4493 – Special Problems in Engr.
CE 4283 – Structural Steel Design	ENGR 4483 – Senior Design II

Arkansas State University, Recent Senior Design Projects Directed

Self-contained Flocking Apparatus, 2009	Explosion Testing System, 2009
Asphalt Road Profiler, 2008	Child Restraint and Safety System, 2008
Portable Maintenance Lift, 2008	Automated Forming System, 2007
Tool Box Transport System, 2003	Platen Storage & Trans. System, 2003

Multi-Function Alarm Clock, 2002	Automatic Steel Post Driver, 2002
Commercial Pecan Harvester, 2002	Steel Parts Cleaning System, 2002
Motor Cover Disassembly Apparatus, 2001	FD Material Transportation System, 2001
Automatic Organic Composter, 2001	Swimming Pool Safety System, 2001
Rice Spillway Installation Machine, 2001	Aluminum Can Crushing System, 2001
Portable Sandbag Filling Machine, 2001	Automatic Ice Cutter, 2000
Automatic Survey Hub Driver, 2000	Product Unloading Mechanism, 2000
Pneumatic Mail Delivery System, 2000	Automobile Spare Tire Storage, 2000
Alternative Waste Disposal System, 2000	Oil-Blast Circuit Breaker Scrubber, 1999

Arkansas State University, University Service Activities

Search Committee for Dean of Engineering, Agriculture & Applied Sciences, 1983-84
University Honors Committee, 1985-87
University Research Council, 1985-87
University Development Committee, 1986-90
Search Committee for Vice President of Academic Affairs, 1986-87
University PRT Committee, College Representative, 1988-89, 1997-99
University PRT Committee, Chairman, 1989-90
Northeast Arkansas Regional Science Fair Judge, 1989-2005
University SUB-PAC 3, 1990
University Admissions and Credits Committee, 1990-93
Search Committee for Dean of College of Business, 1993-94
University Strategic Planning Advisory Committee, 1993-94
Delta Studies Advisory Committee, 1998-2001
Search for Director of Environmental Sciences, 1999-2000
Middle East Studies Committee, 2001-2004
Research and Academic Affairs Council, 2001-2005
University Academic Deans Council, 2001-2009
University Academic Hearing/Grievance Committee, 2002-2004
University Strategic Planning Activities, 2003-2005
Enrollment Management Task Force, 2004-2006
Financial Aid and Scholarships Committee, 2005-2006
Search Committee for Assistant Director of Admissions, 2005
University Buildings, Grounds and Facilities Committee, 2006-08
Search Committee for Dean of ASU Library, 2007-08

Arkansas State University, College Service Activities

College Admissions and Credits Committee, 1982-93, Chairman, 1990-91
College Honors Committee, 1982-87
College PRT Committee, 1988-89, 1994-96, Chair 1997-99
Engineering PRT Committee, Chairman, 1988
College Undergraduate Curriculum Committee, 1985-88
College Research and Review Committee, 1984-88
Engineering Seminar Committee, Chairman, 1984-88
Faculty Advisor for ASU Chapter of ASCE, 1991-2004
Engineering Functional Plan Committee, Chairman, 1994-2001
Engineering Course Standards Committee, Chairman, 2001-present

Search for Mechanical Engineering Faculty, 2001-2002
Search for Civil Engineering Faculty, Chairman, 2002, 2003, 2006
College Grievance Committee, 2002-present
Joint Executive Council: Agriculture, Engineering, Science & Mathematics, 2005-2008
College of Engineering Ambassadors, Creator and Advisor, 2006-present

Arkansas State University, Research Activities

ASU Graduate Thesis Committee, 1982-89 (Agriculture and Biology)
Principal Investigator, Sediment Load Study of the Taylor Bay Watershed in Jackson and Woodruff Counties, Arkansas, US Army Corps of Engineers, \$45,000, 1982-84
Masters Thesis Committee for William F. Johnson, Jr., College of Agriculture, Directed Thesis Work on *Sediment Load of the Taylor Bay Watershed*, 1984
ASU Graduate School Faculty, 1984-present
Principal Investigator, Study of Alternative Oxygen Dissolution Control Strategies for Houston's 200 MGD 69th Street Plant, Funded by the City of Houston, Texas and US Environmental Protection Agency, \$9,500, 1985-86
Principal Investigator, Evaluation of Duckweed for Upgrading Wastewater Treatment Lagoons, Funded by the City of Paragould, Arkansas and US Environmental Protection Agency, \$44,500, 1986-87
University Faculty Research Committee, 1990-93
Ph.D. Dissertation Committee Member for Kwang-Min Lee, Environmental Sciences Program, *Modeling, Optimization, and Formulation of Biopolymer (PHAs) Production from Industrial Wastes by Statistical Experimental Design*, 2001-2004

Arkansas State University, Accreditation Activities

Self-Study Committee for NCA Accreditation of ASU, Engineering Chairman, 1981-82
ABET Committee for ASU Engineering Program, Chairman, 1995-present
Development and Implementation of Plan for *Integrating Design throughout the Engineering Curriculum at ASU*, 1995-97
Preparation of *Self-Study for ASU Engineering Program*, Report for Engineering Accreditation Commission of ABET, June 1998
ABET Meeting for Institutions and Program Evaluators, Baltimore, MD, July 1998
ASU Engineering Advisory Council, Creator and Chairman, 2000-present
Development of Survey Instruments for Graduating Seniors, Alumni and Employers, Conduct Surveys and Evaluate Results, 2001-present
Development of Educational Objectives and Outcome Statements for ASU Engineering Program, 2001-2003
Committee to Assess/Evaluate Achievement of Educational Objectives, 2003-present, Report on Assessment and Evaluation of Educational Objectives, 2003, 2005, 2008
Preparation of *Proposal for Teaching Load Reduction*, Report on the College of Engineering Faculty for ASU Administration, February 2001
University Higher Learning Commission Subcommittee for Criterion III, 2001-02
Preparation of *Interim Report on ASU Engineering Program*, Report for Engineering Accreditation Commission of ABET, January 2002
Preparation of ASU Response to ABET Draft Statement on *Interim Report on ASU Engineering Program*, May 2002

Preparation of *Engineering Course Standards for Undergraduate Students*, a Comprehensive Document on Standards and Methodology, College Standards Committee, R. C. Clift, Chair, Fall 2002

Development and Implementation of *Comprehensive Plan for Continuous Improvement for ASU Engineering Program*, 2003

Program Outcome Committee No. 3, Chairman, 2003-present
Report on Assessment, Evaluation, and Achievement of Outcome No. 3, Prepared For Curriculum Committee and EAC, October 2003, 2006, and 2009

Program Outcome Committee No. 6a, Chairman, 2003-present
Report on Assessment, Evaluation, and Achievement of Outcome No. 6 for Oral Communications, Prepared for EAC, Fall 2006 and Spring 2008

Preparation of *Self-Study for ASU Engineering Program*, Report for Engineering Accreditation Commission of ABET, June 2004

ABET Summer Meeting, Institutional Representative and Team Chair Orientation Day, Arlington, VA, July 2004

ASU Faculty Workshop on Improvement of Outcome Assessment and Evaluation, Organizer and Presenter, August 2004, August 2006, and August 2008

Responsible for Hosting the ABET Visiting Team for Program Evaluation, October 2004

Preparation of *Interim Report on ASU Engineering Program*, Report for Engineering Accreditation Commission of ABET, June 2006

Responsible for Hosting the ABET Visiting Team for Program Evaluation, October 2006

PROFESSIONAL DEVELOPMENT

Remedial Engineering of Hazardous Waste Sites, Two-day Short Course, University of Arkansas for Medical Sciences, Dallas, Texas, January, 1988

SARA Title III and OSHA Right-to-Know, One-day Seminar, Environmental Resource Center, Houston, Texas, March, 1990

Environmental Audits, One-day Seminar, Environmental Resource Center, Little Rock, Arkansas, February, 1991

Bioremediation of Contaminated Soils and Sludges, Three-day Short Course, University of Texas, Austin, Texas, December, 1991

Bioremediation of Organic Chemicals in Soil and Groundwater, One and One-half day Short Course, HAZMAT Technology Conference, Dallas, Texas, September, 1993

Vacuum Extraction for Site Restoration, Two-day Short Course, International Network for Environmental Training, Tampa, Florida, February, 1995

Environmental Audits, One-day Short Course, ASTM, Baltimore, Maryland, November, 1995

Risk Based Corrective Action: The ASTM Guidelines, Three-day Short Course, Rice University Energy & Environmental Systems Institute, Houston, Texas, December, 1996

Hazardous Waste Management: The Complete Course, Two-day Short Course, Environmental Resource Center, Little Rock, Arkansas, March, 1997

Hazardous Materials Management, DOT Certification, One-day Short Course, Environmental Resource Center, Little Rock, Arkansas, March, 1997 & 2000

SuperPave Mixture Design and Analysis, Four-day Short Course, University of Texas, Austin, Texas, April, 1998

ABET *Engineering Criteria 2000*, Two-day Regional Faculty Workshop, Burns & McDonnell International, Kansas City, Missouri, October 1999

The New ACI 318-99 Building Code, One-day Short Course, American Concrete Institute, Little Rock, Arkansas, April 2000

Assessing Student Learning Outcomes, One-day Short Course for Faculty and Administrators, Center for Educational Development and Assessment, St. Louis, Missouri, October 2001

Floodplain Mapping, Design & Modeling, Three-day Short Course, Haestad Methods, Charlotte, North Carolina, April 2001

ABET *Engineering Criteria 2000*, Two-day Faculty Workshop for Program Improvement, Pittsburgh, Pennsylvania, October 2002

Best Assessment Processes V, Three-day Working Symposium on Program Improvement, Rose-Hulman Institute of Technology, Terre Haute, Indiana, April 2003

Teaching the Material Science, Engineering, and Field Aspects of Concrete, 10th Annual Faculty Enhancement Workshop, Austin, Texas, June 2003

Introduction, Intermediate, and Advanced Microsoft Excel, PowerPoint, and Word, Twelve Two Hour Courses, Information Technology Services, Arkansas State University, 2003 & 2004

Enhancing Mathematics and Science Learning with Instructional Technology, Two-day Workshop, 8th Annual Arkansas Spring Forum, Arkansas Network of Centers for Mathematics and Science Education, North Little Rock, Arkansas, February 2004

TEEM UP for Mathematics and Science Partnerships for K-12, Two-day Workshop, 2004 ASME Mechanical Engineers Education Conference, Clearwater Beach, Florida, March 2004

ABET Program Evaluator Training for EAC Visits, One-day Training by The Minerals, Metals & Materials Society, Boston, Massachusetts, November 2004

Recruiting and Retaining Engineers for the 21st Century, 40th ASEE Midwest Section Annual Conference, Fayetteville, Arkansas, September 2005

Assessing Success in Technology Education: A Capstone Conference for the TEI Community, Accreditation Board for Engineering & Technology, Washington, DC, February 2006

AIA Contracts, Two-day Short Course, Lorman Education Services, West Palm Beach, Florida, July 2006

Designing Courses for More Significant Learning Experiences, Half-day Short Course, Arkansas State University, Jonesboro, Arkansas, September 2006

Engineering Technical Writing, One-day Short Course, ASCE Arkansas Section Meeting, Little Rock, Arkansas, September 2006

ACT-20 Post Earthquake Safety Evaluations of Buildings, One-day Short Course, Arkansas ASCE, Arkansas State University, Jonesboro, Arkansas, February 2007

Fundamentals of Earthquake Engineering, Two-day Short Course, American Society of Civil Engineers, Nashville, Tennessee, September 2007

Arkansas Soil & Water Education Conference, One-day Conference, Arkansas State University, Jonesboro, Arkansas, January 2008

Awareness of Critical Water Infrastructure and PBS Film, One-day Workshop, American Society of Civil Engineers, Las Vegas, Nevada, March, 2008

Land Development and LEED Project Requirements, One-day Short Course, Advanced Drainage Systems, Inc., Little Rock, Arkansas, May, 2008

Arkansas Chapter of ASCE Annual Meeting, Two-day Short Course, American Society of Civil Engineers, Little Rock, Arkansas, September, 2008

PUBLICATIONS

- Clift, R. C., *The Quantitative Effects of the Fayetteville Pollution Control Plant on White River*, Masters Special Project, University of Arkansas, Fayetteville, Arkansas, 1974
- Clift, R. C., *A Dynamic Model for Predicting Oxygen Utilization in Activated Sludge Processes*, Ph.D. Dissertation, University of Houston, Houston, Texas, 1980
- Clift, R. C. and J. F. Andrews, *Predicting the Dynamics of Oxygen Utilization in the Activated Sludge Process*, J. Water Pollution Control Federation, 53: 1219, 1981
- Clift, R. C. and J. F. Andrews, *Aeration Control for Reducing Energy Consumption in Small Activated Sludge Plants*, Water Science and Technology (G.B.), 13: 371, 1981
- Clift, R. C., *Trihalomethane Control Strategies*, Proceeding of Annual Meeting, Texas and Southwest Section of AWWA, Oklahoma City, Oklahoma, 1982
- Clift, R. C., J. F. Andrews, and M. T. Garrett, *Minimization of Energy Consumption in the Oxygen Activated Sludge Process*, Conference Proceedings, Energy Savings in Water Pollution Control, International AWPRC, Paris, France, 1983
- Stalcup, G. and R. C. Clift, *Innovative Sewage Collection and Treatment for Small Communities*, Proceedings of Annual Meeting, Arkansas Water Works and Pollution Control Association, Hot Springs, Arkansas, 1984
- Clift, R. C., *A Sediment Load Study of Taylor Bay, Jackson and Woodruff Counties, Arkansas*, Research Report to US Army Corps of Engineers, Department of Engineering, Arkansas State University, 1984
- Clift, R. C. and J. F. Andrews, *Gas-Liquid Interactions in Oxygen Activated Sludge*, Journal of Environmental Engineering Division, ASCE, 112:61, 1986
- Clift, R. C., *The Use of Duckweed for Upgrading the City of Paragould Wastewater Treatment Lagoon*, Research Report to US Environmental Protection Agency, Department of Engineering, Arkansas State University, 1987
- Clift, R. C. and M. Barnett, *Gas Transfer Kinetics in Oxygen Activated Sludge*, Journal of Environmental Engineering Div., ASCE, 114:415, 1988
- Clift, R. C. and M. T. Garrett, *Improved Oxygen Dissolution Control for Oxygen Activated Sludge*, Water Science and Technology, 20:101, 1988
- Clift, R. C., *Gas Phase Control for Oxygen Activated Sludge*, Journal of Environmental Engineering Div., ASCE, 118:390, 1992
- Clift, R. C. and S. Haran, *Improving Student Ability to Design and Conduct Experiments*, Proceedings of Annual Meeting, Accreditation Board for Engineering & Technology, San Diego, California, 2005
- Clift, R. C. and S. Haran, *Teaching Students to Design and Conduct Experiments*, Advances in Engineering Education, Submitted 2007

PRESENTATIONS

- Clift, R. C., *A Dynamic Model for Predicting the Dynamics of Oxygen Utilization in the Activated Sludge Process*, 52nd Annual Conference, Water Pollution Control Federation, Houston, Texas, October 1979
- Clift, R. C., *A Dynamic Model for Activated Sludge*, Annual Meeting, Arkansas Chapter, American Society of Agricultural Engineers, Arkadelphia, Arkansas, October 1980
- Clift, R. C., *Aeration Control for Reducing Energy Consumption in Small Activated Sludge Plants*, International Association on Water Pollution Research, Munich, West Germany, June 1981

- Clift, R. C., *Trihalomethanes: Causes and Control*, Annual Meeting Arkansas Water Works and Pollution Control Association, Hot Springs, Arkansas, April 1982
- Clift, R. C., *Trihalomethane Control Strategies*, Annual Meeting, Texas and Southwest Section of American Water Works Association, Oklahoma City, Oklahoma, October 1982
- Clift, R. C., *Dynamic Modeling and Control of Oxygen Activated Sludge Plants*, Graduate Seminar for Department of Environmental Science and Engineering, Rice University, Houston, Texas, August 1983
- Clift, R. C., *Minimization of Energy Consumption in the Oxygen Activated Sludge Process*, International Association for Water Pollution Research and Control, Specialty Conference on Energy Savings, Paris, France, September 1983
- Clift, R. C., *Management and Disposal Strategies for Hazardous Waste Control*, Northeast Arkansas Existing Industries Association, Jonesboro, Arkansas, February 1984
- Clift, R. C., *Modeling and Control of Activated Sludge*, Graduate Seminar for Department of Civil Engineering, University of Arkansas, Fayetteville, Arkansas, April 1984
- Clift, R. C., *Innovative Sewage Collection and Treatment for Small Communities*, Annual Meeting, Arkansas Water Works and Pollution Control Association, Hot Springs, Arkansas, May 1984
- Clift, R. C., *The New Hazardous Waste Regulations*, Exchange Club, Jonesboro, Arkansas, July 1984
- Clift, R. C., *Recent Changes in the Water Pollution Control Regulations - 1987 Water Quality Act*, Northeast Arkansas Existing Industries Association, Jonesboro, Arkansas, March 1987
- Clift, R. C., *Modeling Gas-Liquid Interactions in Oxygen Activated Sludge*, Graduate Seminar for School of Civil Engineering, Oklahoma State University, Stillwater, Oklahoma, May 1987
- Clift, R. C., *Improved Oxygen Dissolution Control for Oxygen Activated Sludge*, IAWPRC Conference on Design and Operation of Large Wastewater Treatment Plants, Budapest, Hungary, September 1987
- Clift, R. C., *Hazardous Wastes and Global Environmental Issues*, ASU College of Education, Classes on Understanding Global Issues, Spring Semesters, 1988-91
- Clift, R. C., *Groundwater Education at Arkansas State University*, Arkansas Groundwater Association, Panel Discussion Member, Little Rock, Arkansas, March 1989
- Clift, R. C., *Gas Phase Control Strategies for Oxygen Activated Sludge*, 2nd International Symposium on Gas Transfer at Water Surfaces, Minneapolis, Minnesota, September 1990
- Clift, R. C., *New Regulations for Underground Storage Tanks*, Kiwanis Club, Jonesboro, Arkansas, June 1991, Kiwanis Club, Paragould, Arkansas, September 1991
- Clift, R. C., *Update on New EPA and OSHA Regulations*, Northeast Arkansas Existing Industries Association, Jonesboro, Arkansas, March 1993
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Prospective High School Students, Numerous Arkansas Locations, 2002
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Prospective Students, Numerous Arkansas High Schools, 2003
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Numerous Students and Organizations, Regional High School Counselors Meeting, ASU College of Engineering Preview Day, 2004
- Clift, R. C., *Development and ABET Accreditation of a New Environmental Engineering Program*, Florida Gulf Coast University, Fort Meyers, Florida, April, 2005
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Numerous High Schools, ASU College of Engineering Preview Day, 2005
- Clift, R. C. and S. Haran, *Improving Student Ability to Design and Conduct Experiments*, 2005 ABET Annual Meeting, San Diego, California, October 2005

- Clift, R. C., *Assessment Methodologies and ASU Engineering Practices*, Presented to ASU Joint Executive Council, Colleges of Agriculture, Engineering, and Sciences and Mathematics, October, 2005, Presented to ASU Technology Advisory Council, December, 2005
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Numerous High Schools and Community Colleges, ASU College of Engineering Preview Day, 2006
- Clift, R. C., *Overview of ASU College of Engineering*, Presented to Potential Industry Representatives, Paragould Chamber of Commerce, Paragould, Arkansas, July, 2007
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Numerous High Schools, Community Colleges, and Universities, 2007
- Clift, R. C., *Careers in Engineering: Educational Opportunities at ASU*, Presentations to Numerous High Schools, Community Colleges, and Universities, 2008
- Clift, R. C., *Overview of ASU College of Engineering*, Transportation Research Committee 86th Meeting, Arkansas Highway & Transportation Department, Jonesboro, Arkansas, May, 2008

CRITICAL REVIEWS

- Peer Review of Paper on Activated Sludge Submitted for Publication in Water Research, an International Journal, Reviewed for US Editor, 1980
- The Effect of Particulate Organic Material on Activated Sludge Yield and Oxygen Requirement*, by W. Guyer, Critical Review for J. F. Andrews' presentation at IAWPRC Conference, Toronto, Canada, June 1980
- A General Model for the Activated Sludge Process*, by P. L. Dold, G. A. Ekama, and G.v.R. Marais, Critical Review for J. F. Andrews' presentation at IAWPRC Conference, Toronto, Canada, June 1980
- Peer Review of Paper on Activated Sludge Submitted for Publication in Water Research, an International Journal, Reviewed for US Editor, 1982
- Peer Review of Research Proposals (6) on Water Quality Research Submitted to the US Geological Survey under Section 105 of PL98-242, Performed for the Universities Council on Water Resources, 1985
- Proposed Design Parameters for Tri-City Wastewater Disposal System*, by J. L. Foster and G. T. Stalcup, Critical Review, Presented to Arkansas Department of Health, January 1987
- Peer Review of Research Proposals (2) on Water Quality Research, US Geological Survey under Section 105 of PL98-242, Performed for the Universities Council on Water Resources, 1988
- Peer Review of Research Proposals (2) on Water Quality Research, US Geological Survey under Section 105 of PL98-242, Universities Council on Water Resources, 1990
- Peer Review of Research Papers (2) Submitted for the 44th Edition of the Proceedings of the Arkansas Academy of Science, Performed for the Associate Editor, 1990
- Book Review, An Engineer's Guide to Technical Communication, by S. A. Sorby and William Bulleit, Published 2005, Critical Review for US Editor, Prentice Hall Publishing Co., Upper Saddle River, NJ, 2002
- Modeling of Tornado – Structure Interactions*, by R. P. Selvam, Peer Review for Publication in the 57th Edition of the Proceedings of the Arkansas Academy of Science, Performed for the Associate Editor, June 2003
- Modeling Raptor Migration Pathways using a Fluid Flow Analogy*, by Brandes and Ombalski, Peer Review for Publication in Journal of Raptor Research, Performed for US Senior Editor, July 2003

Peer Review of Abstracts (2) Submitted for the Multidisciplinary Engineering Division, 2007 ASEE Annual Meeting, 2006

Peer Review of Papers (2) Submitted for the Civil Engineering Division, Proceedings of the 2007 ASEE Annual Meeting, Honolulu, HA, 2007

Peer Review of Papers (2) Submitted for the Multidisciplinary Engineering Division, Proceedings of the 2007 ASEE Annual Meeting, Honolulu, HA, 2007

Peer Review of Paper Submitted for the Civil Engineering Division, Proceedings of the 2009 ASEE Annual Meeting, Austin, TX, 2009

PRIVATE PRACTICE EXPERIENCE

Engineering Positions

C&D Environmental Services, Inc., Paragould, AR, President & Director of Engineering, 1992 to November 2000, Corporate Secretary & Engineer, 2001-2004

R. C. Clift, Ph.D., P.E., LTD, Paragould, AR, President and Project Engineer, 1981-2004

BCI Engineers, Inc., Jonesboro, AR, Project Engineer, January 1980 to December 1980

S&B Engineers, Inc., Houston, TX, Project Manager for Municipal & Land Development Division, January 1979 to December 1979

S&B Engineers, Inc., Houston, TX, Project Engineer for Municipal & Land Development Division, May 1975 to January 1979

S&B Engineers, Inc., Houston, TX, Structural Engineer for Civil-Structural Division, June 1974 to May 1975

S&B Engineers, Inc., Major Projects & Responsibilities (1974-1979)

As a structural engineer, responsibilities included all civil-structural planning and design on assigned projects and included design of a 14-foot diameter utility tunnel under a major Houston freeway and design of all structural steel and reinforced concrete for a \$28 million oil storage facility for Atlantic Richfield Company, Houston, Texas. Responsibilities while a project engineer included planning and design of water, wastewater and solid waste facilities. Representative projects included industrial water treatment plants for Celanese Chemicals, PPG Industries, Inc., and Olin Corporation, 201 Facilities Planning for wastewater treatment plants to serve Clear Lake City Water Authority (Johnson Space Center) and The Woodlands, Texas. As project manager, responsibilities included preparing proposals and overseeing all environmental projects of the Municipal & Land Development Division. Representative projects included complete responsibility for preparing turnkey bid proposals for design and construction of wastewater treatment facilities for Gulf States Oil and Refining, Corpus Christi, Texas and Dixie Chemicals, Bayport, Texas.

BCI Engineers, Inc., Major Projects & Responsibilities (1980)

Major responsibilities included engineering project design, project management, and corporate client development. Representative projects included obtaining Arkansas Health Department approval for the first small-diameter sanitary sewer collection system in the state, preparation of environmental permit applications, miscellaneous structural design and process investigations for small wastewater treatment facilities, and development of a budget-grade proposal to construct and operate an analytical water and wastewater laboratory for the company.

R. C. Clift, Ph.D., P.E., LTD, Major Projects & Responsibilities (1981-2004)

Major responsibilities include solicitation of civil and environmental engineering work, planning and performing all engineering designs and investigations, serving as President of the corporation, and performing all aspect related to operating a small consulting engineering firm. A listing of significant projects and clients prior to 1992 is listed below. This work was contracted and conducted by R. C. Clift, Ph.D., P.E., LTD. Work performed after 1992 by R. C. Clift, Ph.D., P.E., LTD was performed on a subcontract basis for C&D Environmental Services, Inc.

- Arkla Industries, Inc. Paragould, Arkansas, Closure of Wastewater Treatment Sludge Lagoon, 1981-82, Treatability Study and Process Design of Treatment Facility for Combined Plant Wastes, 1983
- City of Eureka Springs, Eureka Springs, Arkansas, Quality Assurance for Full Scale Field Test, 1988-89
- City of Jonesboro, Jonesboro, Arkansas, Cleanup of Lead, Cadmium, and Copper Contamination at Former Crane Company Property, 1985-86
- City of Houston, Houston, Texas, Study of Process Control at 69th Street Plant, 1985, Model Development and Simulation for 69th Street Plant, 1990
- City of Paragould, Paragould, Arkansas, Development of Industrial Pretreatment Program, 1983, Water and Sewer Rate Study, 1984
- Clean Services, Inc., Jonesboro, Arkansas, Wastewater Survey and Treatability Study, 1984, Design of Pretreatment pH Adjustment System, 1987
- Colson Caster Corporation, Jonesboro, Arkansas, Wastewater Survey and Treatability Study, 1982, Process Design of Treatment Facility for Plating Wastes, 1982, Closure of Burial Site for Cyanide and Plating Wastes Sludges, 1983-85, Project Engineer for New Treatment Plant Expansion, 1990
- Dana Corporation, Paragould, Arkansas, Design of Above Ground Oil Storage Facility, 1990, Closure of UST Facilities, 1990
- Emerson Electric Company, St. Louis, Missouri, Evaluation of Motor Division Plants (eight plants in five states), Die Casting Wastewater and Compliance Requirements, 1988
- Emerson Electric Company, Paragould, Arkansas, Wastewater Characteristics and Pretreatment Requirements, 1981-82, Process Design of Pretreatment Facility for Plating and Metal Finishing Wastes, 1983, Foundation Design for Railroad Car Wench, 1984, Wastewater Characterization and Treatability Study for Die Casting Wastewaters, 1986-87, Design of Treatment Facilities for Die Casting Wastewater, 1988, Design of New Product Tank Farm, 1989
- Emerson Electric Company, Independence, Kansas, Wastewater Characterization of Die Casting Operations, 1988, Pilot Plant Studies and Design of Treatment Facilities for Die Casting Wastewater, 1989-90
- Emerson Electric Company, Kennett, Missouri, Wastewater Characterization for Metal Finishing Wastes, 1989, Design of Wastewater Treatment Facilities, 1989-90
- General Electric Company, Jonesboro, Arkansas, RCRA Closure of Waste Treatment Lagoon, 1986-87
- Lincoln-St. Louis, Jonesboro, Arkansas, Wastewater Survey and Pretreatment Requirements for Metal Finishing Wastes, 1984-85, Closure of Drum Storage Area, 1984, Process Design of Pretreatment Facility for Metal Finishing Wastes, 1984, Closure of UST Facilities, 1989-90
- Martin Sprocket & Gear, Inc., Paragould, Arkansas, Foundation Design for 2000 Ton Press, 1982, Closure of UST Facilities and Cleanup of Contaminated Soils, 1990

Mid-South Manufacturing, Inc., Marked Tree, Arkansas, Characterization of Die Casting Wastewater, 1988, Design of Treatment System for Die Casting Wastewater, 1988, Treatability Study for Wastewater Recycling, 1989
Monroe Auto Equipment Company, Paragould, Arkansas, Process Design of Final pH Adjustment and Water Reuse System, 1984, Design of Lime and Polymer Addition Tanks and System, 1987-88, Budget Grade Estimate for Closure of USTs in Soils Contaminated with Hazardous Wastes, 1989
US Department of Justice, Washington, DC, Expert Witness in Federal Court for Taylor Bay Litigation, Little Rock, Arkansas, 1985

C&D Environmental Services, Inc., Major Projects & Responsibilities (1992-2004)

C&D Environmental Services, Inc. was created in 1992 to fill a need in northeast Arkansas for environmental engineering and contractor services, primarily related to the new UST regulations and RCRA site closures. Major responsibilities included solicitation of civil/environmental engineering and remediation work; planning and performing engineering designs, investigations, contracted environmental remediation, and municipal and utility construction projects; supervision of engineers, environmental technicians, remediation workers, and general laborers; serving as Chairman of the Board of Directors, President of the corporation, and Director of Engineering; and performing all aspects related to operating an engineering and construction company with seasonal employees ranging from five to 15. A listing of significant projects and clients is given below.

Acadia Polymers, Paragould, Arkansas, Stormwater Sampling and Reporting, 1995-2000, Groundwater Sampling and Reporting, 1995-2000
American Greetings, Osceola, Arkansas, Confined Space Tank Cleaning, 1996-97, Consulting on Hazardous Waste, 1996, Design/Construction of Wastewater System, 1996
Arkansas Glass Container Corporation, Jonesboro, Arkansas, Design of Wastewater Treatment Modification, 1996
City of Jonesboro, Jonesboro, Arkansas, Routine Sampling of Landfill Monitoring Wells, 1992-96
City of Paragould, Paragould, Arkansas, Cleanup of Gasoline Spill at City Shop, 1991, Closure of UST for City Light & Water, 1991, Closure of UST at Foremost Dairy, 1994
Colson Caster Corporation, Jonesboro, Arkansas, Design of Drum Storage Area, 1992-93, State Air Emissions Permit Application, 1992 & 1993, Design of Tub Washer Treatment System, 1992, Oil Spill Cleanup and Sampling, 1993 & 1995, Design of New Wastewater Treatment System, 1994-95, Miscellaneous Dirt work & Concrete Construction, 1995
Dana Corporation, Jonesboro, Arkansas, State Air Emissions Permit Application, 1991, Design and Construction of AST Facility, 1997, Closure of UST Facilities, 1997, Closure of Coolant Oil Pits, 1998
Design Products, Inc., Jonesboro, Arkansas, Wastewater Treatability Study, 1995, Routine Process Tank Cleaning, 1995
Emerson Electric Company, St. Louis, Missouri, Cleanup of Diesel Fuel Spill, 1994, General Consulting for US Motors Plants, 2000-01
Emerson Electric Company, Paragould, Arkansas, Remediation of Lead Contaminated Soils & UST Closures, 1996

- Greene County Arkansas, Paragould, Arkansas, Closure of Gasoline UST Facilities, 1991, Cleanup and Remediation of Gas and Diesel Contaminated Soils, 1991, Installation of UST Facilities, 1997
- Jimco Lamp Co., Bono, Arkansas, Sampling On-Site Monitoring Wells for Hazardous Compounds, 1998-99, Risk Assessment Protocol for Contaminated Soils and Groundwater, 2000-01, Sub-surface Soil Sampling for Hazardous Compounds, 2000, Ecological Risk Assessment, 2001, Risk Assessment of Contaminants in Soil and Groundwater, 2002
- Keasler Body Company, Paragould, Arkansas, Cleanup and Disposal of Solvent Spill, 1995, Remediation of Solvent Contaminated Soil, 1996
- Lincoln-St. Louis, Jonesboro, Arkansas, Solidification and Disposal of Oily Wastewater Sludges, 1994 & 2001
- Maclean-ESNA, Pocahontas, Arkansas, Sampling and Disposal of Oil Contaminated Soils, 1995, Industrial Sludge Solidification and Disposal, 1995
- Monroe Auto Equipment Company, Paragould, Arkansas, Release Investigation of Shock Oil from UST, 1992, UST Site Assessment Study for TCE & TCA Soil Contamination, 1992, RCRA Closure of Outdoor UST Facilities and Excavation/Disposal of Soils as Hazardous Wastes, 1992-93, Tank Farm Site Work and Soil Remediation, 1993, Private Well Sampling of Groundwater Contamination at Superfund Site, 1993-94, Plant Site Monitoring of TCE and TCA Contamination in Groundwater, 1993-94, Initial Site Characterization for S-983 Shock Oil Release, 1993, Closure of In-plant UST Facilities with CERCLA Compounds, 1994, Initial Site Characterization of UST Leaking Shock Oil, 1994
- Nucor Steel-Arkansas, Armorel, Arkansas, Sampling and Analysis for EAF Baghouse Area for K-061 Hazardous Wastes, 1996, Site Safety and Health Plan, 1996, Excavation and Staging of K061 Hazardous Wastes, 1997
- Nucor Yamato Steel Co., Barefield, Arkansas, Sampling and Analysis of EAF Dust Contamination, K-061 Hazardous Wastes, 1996
- Superior Garment Rental, Jonesboro, Arkansas, Treatability Study for Wastewater Treatment, 1992
- Waste Services, Inc., Little Rock, Arkansas, Assist with AP&L Oil Spill Cleanup, 1993, AT&T Plating Room Demo, 1994, and Cleanup of 7,000 Gallon Diesel Spill, 1997
- Miscellaneous Gasoline and Oil UST Closure and On-site Remediation Projects: Redbook, Inc., Paragould, AR, 1993, Delta Consolidated Industries, Jonesboro, AR, 1993, Arbyrd Warehouse, Arbyrd, MO, 1993, Arkansas Highway Department, Pocahontas, AR, 1994, U.S. Marshal Service, Greene County, AR, 1994-95, Mississippi County Community College, Blytheville, AR, 1996, Bunge Corporation, Osceola, AR, 1996, Arkansas State Police, Jonesboro, AR, 1996, Greene County Technical Schools, Paragould, AR, 1997, T. Kirk, Former Collier Ford, Paragould, AR, 1997, Delta Technical Institute, Marked Tree, AR, 1997, Southwestern Bell, Paragould, AR, 1997, Blackwell Baldwin Ford, Jonesboro, AR, 1997, Armorel School District, Armorel, AR, 1997, Bay School District, Bay, AR, 1997, Atlas Asphalt, Inc., Jonesboro, AR, 1997, Jackson County Shop, Newport, AR, 1997, Williams Baptist College, Walnut Ridge, AR, 1998, Elder Manufacturing Company, Paragould, AR, 1998, Blytheville Public Works, Blytheville, AR, 1998, Arkansas Game & Fish, Delaplaine, AR, 1998, Littrell Ford, Blytheville, AR, 1999, Stone Auto Parts, Delaplaine, AR, 1999
- Closure of USTs with CERCLA Compounds under RCRA Regulations: Jonesboro CW&L, Jonesboro, AR, 1998, NER Data Products, Blytheville, AR, 1998

- Miscellaneous Soil and Groundwater Investigations for Site Assessment: Razorback Concrete Co., West Memphis Site, 1996, Deluxe Car Wash, Jonesboro, AR, 1997, Atlas Asphalt Plant, Jonesboro, AR, 1998, 49er Capital, Jonesboro, AR, 1998, Littrell Ford, Blytheville, AR, 1999, Barr Investments, Jonesboro, AR, 1999, Robinson Oil Co., Paragould, AR, 1999
- Miscellaneous Emergency Response and Cleanup Projects: Dupre Transport Spill, Jonesboro, AR, 1995, ABF Freight Spill, Walnut Ridge, AR, 1996, PAM Transport Spill, Marked Tree, AR, 1997, Schneider National Spill, West Memphis, AR, 1997, Nabholz Construction Spill, Paragould, AR, 1997, Penske Truck Leasing Spill, Paragould, AR, 1997, Dana Corp. Spill, Jonesboro, AR, 1998, Davis Farms Spill, Walnut Ridge, AR, 1998, Schackelford Farm Spill, Birdeye, AR, 1998, T. Kirk, Former Collier Ford, Paragould, AR, 1998, Razorback Concrete Company, West Memphis, AR, 1998, Bay Gin Co., Bay, AR, 2000
- Miscellaneous Gasoline, Diesel and Oil UST Installations: Greene County Technical Schools, Paragould, AR, 1997, Greene County Sheriff/Jail, Paragould, AR, 1997, Bay School District, Bay, AR, 1997, Blytheville Public Works, Blytheville, AR, 1998
- Turnkey Design and Construction of Residential Developments including Streets, Stormwater Drainage Systems, Sanitary Sewer Collection and Pumping Systems, and Water Distribution Systems: Quail Meadows Phase II, Paragould, AR, 1997-98, Callaway Hills, Paragould, AR, 1998-2000, Deerborn Hills, Paragould, AR, 1999-2003, Hill Home Estates, Paragould, AR 2000-2004
- Design of Residential Developments: Pleasant Woods, Preliminary Engineering, 1997, Deer Field Acres, Paragould, AR, 2000, Crestwood Phase I, Paragould, AR 2000-01

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- Clift, R. C., *Infiltration/Inflow Analysis of Wastewater Collection System*, Harris County Fresh Water Supply District No. 6, S&B Engineers, Inc., 1975
- Clift, R. C., *Infiltration/Inflow Analysis of Wastewater Collection System*, Montgomery County Water Control & Improvement District No. 1, S&B Engineers, Inc., 1975
- Clift, R. C., *Facilities Plan for Wastewater Treatment Facilities*, City of Willis, Texas, S&B Engineers, Inc., 1975
- Clift, R. C., *Environmental Assessment for Construction of Wastewater Collection and Treatment Facilities*, National Environmental Policy Act Compliance, Harris County Fresh Water Supply District No. 6, S&B Engineers, Inc., 1976
- Clift, R. C., *Environmental Assessment for Construction of Wastewater Collection and Treatment Facilities*, National Environmental Policy Act Compliance, City of Coldspring, Texas, S&B Engineers, Inc., 1976
- Clift, R. C., *Facilities Plan for Wastewater Treatment Facilities*, City of Coldspring, Texas, S&B Engineers, Inc., 1976
- Clift, R. C., *Facilities Plan for Wastewater Treatment Facilities*, Harris County Fresh Water Supply District No. 6, S&B Engineers, Inc., 1976
- Harris, T. and R. C. Clift, *Facilities Plan for Wastewater Treatment Facilities*, Montgomery County Water Control & Improvement District No. 1, S&B Engineers, Inc., 1977
- Clift, R. C., *Infiltration/Inflow Analysis of Wastewater Collection System*, San Jacinto River Authority, S&B Engineers, Inc., 1977
- Clift, R. C., *Engineering Report on Expansion of the Wastewater Treatment Facilities*, Clear Lake City Water Authority, S&B Engineers, Inc., 1978

- Clift, R. C., *Environmental Assessment for Construction of Wastewater Collection and Treatment Facilities*, National Environmental Policy Act Compliance, Clear Lake City Water Authority, S&B Engineers, Inc., 1978
- Sherwood, D. and R. C. Clift, *Environmental Assessment for Stage III Expansion of the Woodlands Sewage Treatment Plant No. 1*, National Environmental Policy Act Compliance, San Jacinto River Authority, S&B Engineers, Inc. 1978
- Clift, R. C., *Design Basis and Construction Cost Bid for Wastewater Treatment Facilities*, Gulf States Oil and Refining Company, Corpus Christi, Texas, S&B Engineers, Inc., 1979
- Clift, R. C., *Evaluation of Innovative Sewage Collection and Treatment Facilities for Unsewered Communities*, BCI Engineers/Surveyors, Inc., Jonesboro, Arkansas, 1980
- Clift, R. C. and G. T. Stalcup, *Report on Water and Sewer Needs*, Bono, Arkansas, BCI Engineers/Surveyors, Inc., Jonesboro, Arkansas, 1980
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- Clift, R. C., *Baseline Report on Wastewater Characteristics and Pretreatment Requirements*, Emerson Electric Company, Paragould, Arkansas, 1981
- Clift, R. C., *Wastewater Survey and Treatability Study*, Colson Caster Corporation, Jonesboro, Arkansas, 1982
- Clift, R. C., *Closure of Cyanide and Plating Sludge Drum Burial Site*, Colson Caster Corporation, Jonesboro, Arkansas, 1983
- Clift, R. C., *Industrial Pretreatment Program*, City of Paragould, Paragould, Arkansas, 1983
- Clift, R. C., *Water and Sewer Rate Study*, City of Paragould, Paragould, Arkansas, 1984
- Clift, R. C., *Wastewater Survey and Treatability Study*, Clean Services, Inc., Jonesboro, Arkansas, 1984
- Clift, R., C., *Wastewater Survey and Pretreatment Requirements for Metal Finishing Wastes*, FMC Corporation, Jonesboro, Arkansas, 1984
- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Monroe Auto Equipment Company, Paragould, Arkansas, 1984
- Clift, R. C., *Study of Process Control at 69th Street Plant*, City of Houston, Houston, Texas, 1985
- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Colson Caster Corporation, Jonesboro, Arkansas, 1985
- Clift, R., C., *Wastewater Survey and Pretreatment Requirements for Metal Finishing Wastes*, Lincoln-St. Louis, Jonesboro, Arkansas, 1985
- Clift, R. C., *Cleanup Activities and Final Sampling of Lead, Chromium, and Copper Contamination at Former Crane Company Property*, City of Jonesboro, Jonesboro, Arkansas, 1986
- Clift, R. C., *Study of Sulfide Buildup in Sanitary Sewers*, Jonesboro Concrete Pipe Company, Jonesboro, Arkansas, 1986
- Clift, R. C., *Wastewater Characterization and Treatability Study for Die Casting Wastewaters*, Emerson Electric Company, Paragould, Arkansas, 1987
- Clift, R. C., *Summary Report for RCRA Closure of Wastewater Treatment Lagoon*, General Electric Company, Jonesboro, Arkansas, 1987
- Clift, R. C., *Toxic Organics Management Plan*, Continental Systems, Inc., Jonesboro, Arkansas, 1988

- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Dana Corporation, Jonesboro, Arkansas, 1988
- Clift, R. C., *Motor Division Report on Die Casting Wastewater and Compliance Requirements*, Emerson Electric Company, St. Louis, Missouri, 1988
- Clift, R. C., *Baseline Monitoring Report on Die Casting Facilities*, Emerson Electric Company, Rogers, Arkansas, 1988
- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Emerson Electric Company, Oxford, Mississippi, 1989
- Clift, R. C., *Baseline Monitoring Report on Die Casting Facilities*, Emerson Electric Company, Independence, Kansas, 1989
- Clift, R. C., *Baseline Monitoring Report for Metal Finishing Wastes*, Emerson Electric Company, Kennett, Missouri, 1989
- Clift, R. C., *Budget Grade Estimate for Closure of RCRA UST Facilities*, Monroe Auto Equipment Company, Paragould, Arkansas, 1989
- Clift, R. C., *Closure of UST Facilities and Soil Remediation*, Dana Corporation, Paragould, Arkansas, 1990
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- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Mid-South Manufacturing, Marked Tree, Arkansas, 1991
- Clift, R. C., *Corporate Safety and Health Plan*, C&D Environmental Services, Inc., Paragould, Arkansas, 1992
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- Clift, R. C., *Report on RCRA Closure of Outdoor UST Facilities*, Monroe Auto Equipment Company, Paragould, Arkansas, C&D Environmental Services, Inc., 1993
- Clift, R. C., *Site Assessment Report on Gasoline Release from UST*, Boorhem-Fields, Inc., Black Rock, Arkansas, C&D Environmental Services, Inc. 1993
- Clift, R. C., *Phase I Environmental Site Assessment*, Razorback Concrete Company, Blytheville, Arkansas, C&D Environmental Services, Inc., 1993
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- Clift, R. C., *Report on RCRA Closure of In-Plant UST Facilities*, Monroe Auto Equipment Company, Paragould, Arkansas, C&D Environmental Services, Inc., 1994
- Clift, R. C., *Phase I Environmental Site Assessment*, Mid-South Community College, West Memphis, Arkansas, C&D Environmental Services, Inc., 1994
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- Clift, R. C., *Phase I Environmental Site Assessment*, Elder Mfg. Co., Industrial Warehouse, Paragould, Arkansas, C&D Environmental Services, Inc., 1994
- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Acadia Polymers Plant Site, Paragould, Arkansas, C&D Environmental Services, Inc., 1995
- Clift, R. C., *Cleanup of Paint Solvent Spill and Soils Remediation*, Keasler Body Company, Paragould, Arkansas, C&D Environmental Services, Inc., 1995
- Clift, R. C., *Spill Prevention Control and Countermeasure Plan*, Nucor Steel-Arkansas, Armorel, Arkansas, C&D Environmental Services, Inc. 1995
- Clift, R. C., *Gasoline UST Closure and Soils Remediation*, US Marshall Service, Greene County, Arkansas, C&D Environmental Services, Inc. 1995
- Clift, R. C., *Excavation and Disposal of Lead Contaminated Soils*, Emerson Electric Company, Paragould, Arkansas, C&D Environmental Services, Inc., 1996
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- Clift, R. C., *Sampling and Analysis of EAF Baghouse Area for Lead, Cadmium, and Chromium Contamination*, Nucor Yamato Steel Company, Barfield, Arkansas, C&D Environmental Services, Inc., 1996
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