

# Cathy West Dougherty, P.E.

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## Professional Licenses, Registrations and Appointments

**Professional Engineer**, License No. 76589, State of Texas.

**LPST Corrective Action Project Manager**, License No. CAPM00926, Texas Natural Resource Conservation Commission (TNRCC), now Texas Commission on Environmental Quality (TCEQ).

**Mold Assessment Consultant**, License No. MAC1145, Texas Dept. of State Health Services

**Wastewater Operator License**, License No. 5229, Grade 4-M, State of Massachusetts.

**Certified Remediation Specialist**, Environmental Assessment Association (EAA),

**TCEQ Small Business Advisory Committee. Member since 2003**

**TCEQ Enviromentor**

**Former member**, Environmental Board, City of Rowlett, Texas. 2000-2005

Small Business Member, SAME Board of Directors, Dallas and Fort Worth

## Employment History

Dougherty Sprague Environmental, Inc. (**dse**), Dallas, Texas, March 1998 - present.

CEO, Principal Engineer and Majority Owner, November 2007 - present.

President, Principal Engineer and Majority Owner, March 1998 - November 2007.

Principal Engineer, LCA Environmental, Inc., Dallas, Texas, 1996 - 1998.

Environmental Division Manager and Principal Engineer, LAW, Dallas, Texas, 1993 - 1996.

Industrial Services Manager, Fugro-McClelland (Southwest), Inc. now ENSR, Dallas, Texas, 1992 - 1993.

Remediation Project Manager, U.S. TEC now GZA Geo-Environmental, Inc., Lexington, Mass., 1991 - 1992.

Environmental Project Manager, Bostik, Inc., a division of Total Chemie (formerly Black & Decker), Middleton, Mass., 1989 - 1991.

Dow Chemical, U.S.A. 1981 - 1989:

Sr., Production Engineer, Environmental and Production Supervisor, Allyns Point Plant, Gales Ferry, CT, 1985 - 1989.

Research Engineer and Technical Field Service Engineer, Granville Research Center, Granville, OH, 1982 - 1985.

Production Engineering Styrofoam Hazardous Waste Coordinator, Hanging Rock Plant, Ironton, OH, 1981 - 1982.

Works Engineer – Environmental, Armco Steel, Ashland, KY, 1979.

Ultrasonic Transducer Prototype Technician, Smith Kline (K.B. Aerotech), Lewiston, PA, 1978.

Thermodynamics Lab Technician, Research and Development, Westinghouse, Pittsburgh, PA, 1977.

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**Professional  
Experience**

In 1998, Mrs. Dougherty established Dougherty Sprague Environmental, Inc. (**dse**) in Dallas, Texas. She is President, Principal Engineer and majority shareholder (currently owning 100% of **dse**). **dse** is a professional environmental engineering and consulting firm specializing in site assessment and remediation. Mrs. Dougherty has also developed specialty expertise in assessment of dry cleaners and chlorinated solvents, in general. She also has expertise in indoor air quality issues, and assessment for molds, carpet soiling and specialty indoor toxins. She has over twenty-eight years of environmental, chemical, and mechanical engineering and consulting experience and provides daily technical direction and personnel oversight for the firm's various projects.

Prior to establishing **dse**, she was Principal Engineer at LCA Environmental, Inc. Mrs. Dougherty took a lead role in establishing and implementing the technical aspects of LCA's projects, business and business development, as well as implementation of the total quality management program. She is also a senior technical reviewer for other firms' contributions to LCA projects, and sealed much of LCA's work as a Professional Engineer and TNRCC (now TCEQ) registered Corrective Action Project Manager.

Her twenty-eight years of experience includes over twenty years in the direct management of technical personnel, vendors and project consultants. She has served as Environmental Department Manager, Industrial Services Manager, and Remediation Project Manager for other national environmental consulting firms from 1989-1996. From 1993-1996 she was Division Environmental Manager for Law Engineering and Environmental Services, Inc. (LAW), now MACTEC, in Dallas, Texas. In 1995, she also was confirmed as a Principal with LAW.

Prior to becoming a consultant, Mrs. Dougherty worked in various environmental and manufacturing engineering positions, primarily for chemical plants. As Environmental Project/Compliance Manager for Bostik Adhesives, a Division of Total Chemie (formerly Black & Decker), she directed a small corporate environmental and capital project group, administered plant RCRA and other environmental compliance programs, and developed new programs to cost effectively meet the needs of company plants and the changing regulatory climates. For fourteen years, she held progressively more responsible positions in process engineering, chemical plant production, plant management, wastewater treatment design, and environmental and safety compliance.

Recent key RCRA projects include:

- Expert Witness/Documentation Review in the case of Sony Nguyen, Mi Nguyen, Mizozu Corp. and Tchang Corp. vs. Mondial Dry Cleaning Products Inc. d/b/a Union Dry Cleaning Products and Union, S.p.A.. This was a personal injury, damage claim, with RCRA non-compliance claims, and diminution of property claim against our client. The case was resolved through mediation.
- Expert Witness/RCRA CERCLA Review for Shell Station, Arlington, TX.
- TCEQ Permitting for RCRA and Waste Water System, Koontz Bayou, TX.
- RCRA Small Quantity Generator Status Review, Turbine Resources, Eules, TX.
- TCEQ Violation Resolution for RCRA, Solid Waste and Waste Water, city of Rochester, TX.
- Transfer of Louisiana Army Ammunition Plant (LAAP) to LANG, Camp Minden, LA.; Army Environmental Baseline Study, with FONSI and FONSET review.

**Environmental  
Specialty  
Experience**

Mrs. Dougherty has provided senior technical leadership, review, and/or environmental project management for a broad range of environmental assessments. These assessments include: Phase I Environmental Site Assessments for property transaction risk screening; Phase II Site Investigations of petroleum underground storage tanks; subsurface hazardous contaminant investigation; and projects related to commercial real estate developments, chemical plants, refineries, bulk terminals, industrial facilities, waste treatment and disposal facilities. Many of these projects have required the direction and coordination of multi-site facilities, with geographically dispersed personnel and various subcontractors assigned to a large variety of tasks and diverse technical goals.

Training

Mrs. Dougherty has over 20 years experience in the preparation or teaching of management, environmental and occupational based training programs for adults. She has provided training in environmental, engineering and safety topics, including OSHA standards and auditing, environmental auditing, storm water pollution plan awareness and auditing, asbestos awareness and in place management, hazardous materials management, use and compliance of Underground Storage Tanks (USTs) systems, investigation of sites with chlorinated solvents impacts and remediation and related topics. She taught as an adjunct lecturer for several courses (Environmental Auditing-Basic and Advanced, HAZWOPER Training, Lead-based Paint Inspector, and Introduction to Environmental Law) provided by the University of Texas-Arlington for five years. She periodically is and has been a guest lecturer for Brookhaven College and the Executive Environmental Series for the last six years.

She has sponsored and prepared mentoring courses for young professionals and engineers through the Lyle School of Business SMU University and Society of American Military Engineers (SAME's) Young Member Programs. She is a graduate of the Community Entrepreneur MBA Program at University of Texas, Austin (1998) and the Dartmouth Women Executives Center (2007).

For these training courses, in addition to teaching, Mrs. Dougherty generally also developed the curriculum, in a variety of media, as well as supervised manual preparation and final quality control. With Charles W. Sprague, PG, she has prepared and taught training courses for a variety of government agencies including the United States Post Office, Texas Commission on Environmental Quality (TCEQ), State of Florida Department of Environmental Quality, and State of South Carolina Department of the Environment. She has also developed courses and lectured on numerous topics for private companies, such as Weingarten Realty, Ty Equity, Dow Chemical, Federal Teachers Retirement Fund, Mactec, Inc., (formerly Law Engineering and Environmental Services), Black & Decker, and Williamson-Dickies.

RCRA and Chlorinated Solvent Assessments

Mrs. Dougherty has an in-depth knowledge of assessments of dry-cleaning operations and other RCRA assessments and the unique environmental risks associated with commercial facilities and chlorinated solvents. Services provided, conducted, and/or managed by Mrs. Dougherty include: tenants lease renewal inspections, environmental compliance surveys and operations-equipment plans and designs, site investigations and remediation. In addition, Mrs. Dougherty has conducted both in-house and client training in dry-cleaning operation assessments. She has assisted her clients in plan development for risk and liability management for property/portfolios involving dry-cleaning plants.

Soil and Groundwater Remediation

Fourteen years of her experience has specifically included wastewater and

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groundwater treatment and remediation. She has designed various cost effective, goal oriented remedial systems utilizing destructive, and/or stabilizing treatment technologies including the following treatment types: air stripping, tray-aeration, vapor extraction, air sparging, bioventing, in-situ bioremediation, land-farming, thermal desorption/incineration, granular activated carbon adsorption, surfactant soil washing, stabilization, etc.

She has managed and/or provided technical oversight of corrective action plans in fifteen states, Canada, and Mexico. She has participated in technical review, expert testimony and project design engineering for corrective actions under Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Her "hands-on" practical remediation experience includes a wide range of contaminants including petroleum constituents, pesticides, metals, PCBs, solvents, chlorinated halogens (including DNAPLs used in industry and dry cleaning/textiles), other Volatile Organic Compounds (VOCs), semi-VOCs, radio-nucleotides and asbestos.

#### Permitting and Regulatory Compliance

Mrs. Dougherty has in-depth knowledge of regulations and permitting for waste reduction, RCRA, hazardous waste, general OSHA and worker safety, industrial hygiene and other air, wastewater, or solid waste handling and/or permitting compliance requirements. Her industrial programs have won internal and external awards and recognition for innovation in waste reduction and environmental excellence. She has participated in design of new facilities/plants/unit operations for preventive environmental and risk management. This has included preparation of Spill Prevention Countermeasures and Control Plans, RCRA, and NPDES permitting and toxicity reduction investigations. She is familiar with and has used the processes of "Total Quality Management", ISO 14000 and other related quality or statistical process control methods to evaluate and monitor total environmental program effectiveness performance at plant or corporate level.

#### NEPA and Planning

Mrs. Dougherty have been principle planner and engineer on NEPA document preparation including EA, EISs, FONSI and Categorical Exclusions for Cities of Dallas, Fort Worth, Plano and Lancaster, TX, US GSA, FAA and NAVY (Navfac) planned construction projects. These projects have included preparation wetlands 404 permitting, archeological investigations, historic markers and building research, threatened endangered species, migratory bird issues and social issues ("environmental justice").

She has also been responsible for coordination and/or content and conducting of the public comment and participation which has included public meeting facilitation and planning, charettes, website monitoring, phone call response, email response and documentation of all levels of comment. She has prepared final copy and media materials, postcards, signage, and other out reach literature.

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Asbestos, Lead-based Paint, Mold Assessments & Expert Testimony

Mrs. Dougherty has provided oversight, expert testimony and testing for numerous sites for assessment of indoor air quality, molds, carpet soiling and specialty indoor toxins. These studies have been for both residential and commercial clients with a wide range of problems and complaints.

Mrs. Dougherty's mechanical engineering background and understanding of heating, ventilating and air conditioning design has helped clients to understand and prevent reoccurrence of these problems and eliminate/remediate indoor toxins. She has provided training, remediation specification development and/or oversight to over twenty-five mold or Indoor Air Quality projects, many of which involved litigation.

**Publications and Presentations**

"Remedial Options for a Dry Cleaner", Dougherty, Clean Scene, January 1995.

"How is Perchloroethylene from Drycleaning Facilities Released to the Environment?", Dougherty and Terepka, LAW Press, 1996.

"Using an Environmental Operations and Maintenance Plan to Minimize Solvent Releases from Dry Cleaners", Dougherty and Terepka, LAW Press, 1996.

"Design Considerations for Chlorinated DNAPL Releases", Dougherty, TNRCC Seminar, September 1997.

"RCRA Regulations, A Short Course" Dallas Section, Executive Enterprises, 1997-2000, University of Texas, Arlington, Adjunct Professor.

"Environmental Assessment and Case Studies of Dry Cleaner Contamination", Dougherty and Sprague..

**Education**

1998, University of Texas, Austin, Texas

**Enterprise Community MBA**

1979 - 1981, The Ohio State University, Columbus, Ohio

**Bachelor of Science**

- Mechanical Engineering with an emphasis on Environmental Control and Pollution Abatement.
- Post Graduate Studies with Concentration in Pollution Abatement.

1974 - 1977, Carnegie-Mellon University, Pittsburgh, Pennsylvania

**Undergraduate Studies**

- Engineering.

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**Relevant  
Continuing  
Education**

Properties of Concrete and Concrete-Making Materials, University of Wisconsin-Extension, Dept. of Engineering and Applied Science, December 1983.

Groundwater Remedial Strategies, Geraghty & Miller, Inc., April 1990.

Forty-hour Hazwoper and Supervisor, OSHA 29 CFR 1910.120, and annual eight-hour refreshers since 1993.

Surfactant-Enhanced Aquifer Remediation and Well-Test Methods for Characterizing NAPL Zones, Environmental Education Enterprises, December 1995.

Statistical Processes for Environmental Projects, April 1996.

Bloodborne Pathogens, American Safety & Health Institute, January 2004 and refreshers

American Heart Association Adult CPR, Texas CPR Training, January 2005 and refreshers

IS-00700 National Incident Management System (NIMS) an Introduction, FEMA, May 2007

Community Emergency Response Team Train-the-Trainer, Texas Department of Public Safety, September 2007

Wetlands Permitting Workshop, US Army Corp of Engineers-Galveston District, October 2007

Mold Assessment Consultant, Gebco Associates, September 2009

**Professional  
Memberships**

Society of Texas Environmental Professionals (STEP)

National Ground Water Association

The Society of American Military Engineers (SAME)

Dallas Council of Engineers Companies (DCEC)