
APPENDIX D
RESUMES OF KEY CITY ENGINEERS

Alice L. Cannella, P.E.

PROFESSIONAL EXPERIENCE

2002 to present	Plant Superintendent	City of Chattanooga, Tennessee Interceptor Sewer System
1991 to 2002	System Engineer	City of Chattanooga, Tennessee Interceptor Sewer System
1990 to 1991	Professional Engineer	Fyie Engineering
1984 to 1990	Director Engineering Developm	Hamilton County Government
1981 to 1984	Project Engineer	Hamilton County Government
1979 to 1981	Research Analyst	Tennessee Valley Authority
1978 to 1979	Environmental Engineer	Tennessee Valley Authority

EDUCATION

B.S. Civil Engineering, Tennessee Technological University, 1978

PROFESSIONAL REGISTRATIONS

Professional Engineer – Tennessee, Number 15868
Certified Grade II Collection System Operator – Tennessee
Certified Grade IV Wastewater Plant Operator – Tennessee

PROFESSIONAL ASSOCIATIONS

Water Environment Federation
Society of Women Engineers
Board of Engineering Advisors – Tennessee Technological University
Engineering Development Foundation – Tennessee Technological University

Naveed A. Minhas P.E.

PROFESSIONAL EXPERIENCE

2004- Present	City Engineer	City of Chattanooga TN
1996 - 2003	Engineering Manager	City of Chattanooga, TN
1992 - 1994	Project Manager	Stone & Webster Engineering, MA
1973 - 1992	Supervising Engineer	United Engineers, Philadelphia, PA
1970 - 1973	Bridge Engineer	Urban Engineers, Philadelphia, PA
1968 - 1970	Assistant Director	Capital Development Authority, Islamabad, Pakistan

EXPERIENCE HIGHLIGHTS

Project Management- Design through construction. The types of Projects include multi-story buildings, bridges, Nuclear Power Plants, highways, Waste Resources Projects, streetscapes and other related Civil Projects.

EDUCATION

Masters of Business Administration (MBA); Nova University, FL., 1985
M.S. Civil Engineering Courses, University of Pennsylvania, 1975
B.S. Civil Engineering, University of Pakistan, 1968

SPECIALITY COURSES/TRAINING

Fall out Shelter Analysis Certification
American Welding Society Certification
Total Quality Management Training

PROFESSIONAL REGISTRATIONS

Registered Professional Engineer- Tennessee, Pennsylvania and Washington

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
American Society of Mechanical Engineers
American Public Works Association
Engineers Club-Chattanooga, TN
Affiliate Broker, Chattanooga, TN

Engineering Experience of Michael C. Patrick

Education: Bachelor of Science in Engineering, Mechanical
University of TN at Chattanooga, 1992

Employment Experience:

Landfill Technician – 11/28/92 to 12/22/95 (City of Chattanooga)

Responsible for maintenance and operation of the City of Chattanooga's landfill gas recovery system.

Responsible for development and implementation of hazardous waste detection and disposal procedures for incoming waste loads at landfill.

Performed land surveys and project layouts using field surveying equipment.

Developed topographic maps and performed landfill volume usage calculations.

Prepared site plans, specifications and permit documents for Composting operation at the City of Chattanooga Wood Recycling Center.

Prepared site plans and permit documents for Tire Storage facility at landfill.

Landfill Engineering Technician – 12/23/95 to 11/19/98 (City of Chattanooga)

Responsible for Landfill Technician duties described above.

Prepared drawings and specifications for landfill leachate collection system.

Designed and prepared specifications for landfill gas well de-watering system.

Performed gas system performance studies and developed plans and specifications for gas system improvements.

Monitored construction of Subtitle D landfill liner, leachate pumping stations and various gas system improvement projects.

Responsible for design and layout of waste cells to correspond to permit requirements.

Responsible for layout and construction of landfill slopes and terraces to meet construction plan requirements.

Performed plan reviews for landfill construction and permitting.

Performed waste compaction studies.

Responsible for development and implementation of stormwater pollution prevention plan. Designed and constructed temporary erosion control measures as necessary.

Landfill Supervisor – 11/20/98 to 8/22/03 (City of Chattanooga)

Responsible for daily operation of landfill, budgeting and long term planning.

Responsible for compliance of landfill with all applicable federal, state and local rules and regulations. Initiated any actions necessary to correct deviations or violations.

Responsible for new landfill facility layout.

Provided engineer of record with recommendations for modifications to the landfill design to increase serviceability of various structures and equipment.

Designed and supervised construction of numerous roadways and drainage structures to facilitate vehicular access and minimize stormwater contamination.

Responsible for development and implementation of Title V, NSPS and local air pollution prevention and control plans at operating and closed landfills.

Responsible for oversight of gas flare emissions testing.

Responsible for NPDES permit implementation at operating and closed landfills.

Responsible for design and construction of modifications to leachate collection, landfill gas and truck washing systems.

Responsible for operation, maintenance, and modification to numerous leachate pumping stations with capacities ranging from 10 to 700 gpm.

Designed and supervised construction of a 100 gpm, dual-contained, leachate pumping station and force main to convey leachate from one area of landfill to another.

Prepared initial design for 1000 cfm landfill gas flare with horizontal collection system to facilitate the removal of gas during landfilling operations.

Evaluated landfill gas system data, made recommendations, and assisted consultants as necessary to improve performance.

Prepared plans and specifications for capital projects of landfill gas recovery system such as refractory, blower, and pumping system replacement.

Designed and supervised construction of additional pumping system for truck wash to increase performance.

Designed and supervised construction of wash-water filtering system on truck wash.

Responsible for groundwater monitoring programs at operational and closed landfills including sample collection, well placement and construction.

Made recommendations and prepared specifications for the procurement and usage of landfill and recycling center vehicles and heavy equipment.

Waste Resources System Engineer – 8/23/03 to present (City of Chattanooga)

Responsible for maintenance, operation and repair of the City of Chattanooga's gravity sanitary sewer system.

Responsible for flow monitoring and mapping of sewer system.

Develops and implements budgets and monitors expenditures.

Administers repair and line cleaning contracts.

Supervises Sewer Maintenance and Inflow/Infiltration crews.

Review and approve/disapprove new connections to City sewer system by regional users.

Responsible for the establishment of goals, work plans, policies and procedures pertaining to maintenance and operation of the City sewer system.

William C. Payne, P.E.

PROFESSIONAL EXPERIENCE

November 1999-Present *Storm Water Manager, City of Chattanooga*
Oversee administration of the stormwater fee, drainage system design and modeling, and NPDES water quality monitoring and sampling programs. Responsible for \$5 million operational budget.

July 1998-November 1999 *Engineering Project Coordinator, City of Chattanooga*
Designed road widening, streetscape, and curb & gutter projects. Coordinated utility relocation for projects constructed in-house. Calculated cost estimates. Assigned work to design staff. Developed schedule of completion for design work.

December 1995-July 1998 *Engineering Designer, City of Chattanooga*
Designed road widening, streetscape, and curb & gutter projects. Coordinated utility relocation for projects constructed in-house. Calculated cost estimates.

May 1995-December 1995 *Project Engineer, East Tennessee Grading, Inc.*
Responsible for construction of two-foot clay liner and drainage layer at Summit Landfill. Coordinated schedule with general contractor and subcontractors. Performed field moisture tests to determine required soil modifications prior to testing by Inspector.

EDUCATION

B.S. Civil Engineering, University of Tennessee at Knoxville, 1995

PROFESSIONAL REGISTRATIONS

Professional Engineer - Tennessee

PROFESSIONAL ASSOCIATIONS

National Society of Professional Engineers
Tennessee Society of Professional Engineers
American Society of Civil Engineers
American Public Works Association

LEE M. STARNES, P.E.

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SUMMARY OF QUALIFICATIONS

Environmental Consultant with expertise in site assessments, project management and business development. Extensive experience in the design and maintenance of remediation systems, storage tanks, spill prevention and response strategies, and corrective action plans. Managed a staff of up to 20 with budgets totaling \$1.5 million. Registered Environmental Engineer (AL, GA & TN).

PROFESSIONAL EXPERIENCE

Golden Gallon, Inc., - Chattanooga, TN

1997 to Present

Manager/Director of Environmental and Petroleum Services

Environmental Manager for a chain of 138 convenience stores/service stations.

- Maintained state and federal regulatory compliance for all aspects of fueling equipment and operations for 138 convenience stores in Georgia and Tennessee.
- Supervised virtually every aspect of UST systems, including: regulatory compliance for approximately 550 USTs, removal and closure of numerous UST systems, design and installation of new UST systems, upgrades to various components on UST systems such as dispensers, STPs, piping, sumps, automatic tank gauges (ATGs) and cathodic protection, compliance inspections and record audits in Georgia and Tennessee.
- Installed the installation of approximately 40 impressed current corrosion protection (ICCP) systems on older UST systems and performed three-year performance surveys. Installation of these ICCP systems offset the replacement of these UST systems for a savings of over \$2 million.
- Led spill responses at all locations which included containment and cleanup various gasoline, diesel, kerosene, and motor oil surface spills, site management and safety, and interaction with third party cleanup crews, store personnel, customers, police, and fire department personnel.
- Set up in-house system to allow remote polling of ATGs for real time monitoring of UST leak detection and fuel inventories, eliminating over \$100,000 in third party leak detection expenses.
- Managed the permitting, installation and operation of an alternative wastewater treatment system. This system included use of new technology which allowed permitting of a system which in turn allowed installation and construction of a new convenience store.

Environmental Consultant

1996 to 1997

Worked as an independent consultant on a contractual basis. Performed environmental site assessments and audits, and prepared design specifications for various bid packages and proposals.

- Conducted and supervised numerous Phase I and II ESAs for major lending institutions in Tennessee. The Phase II projects involved the drilling and sampling of soil borings and ground water monitoring wells to evaluate the nature and extent of areas of concern identified prior to, or during the Phase I ESAs. The investigations allowed numerous property transactions to be completed with the resolution of environmental concerns.
- Performed an independent evaluation of all projects and receivables for Marion Environmental Co. resulting in the discovery of significant over and under-booked receivables.

AQUATERRA. INC., - Chattanooga, TN

1991 to 1996

Branch Manager/Project Manager

- Conducted Phase I and II Environmental Site Assessments (ESAs); hazardous waste management; impacted soil and ground assessments and remediation; voluntary RCRA assessments and cleanups; and UST removals, installations, closures, release response, investigations, and remedial actions.
- Designed and implemented UST Corrective Action Plans and RCRC/CERCLA voluntary cleanups including pump and treat, soil vapor extraction, in-situ air sparging, and dual phase extraction for remediation of soil and ground water impacted by petroleum hydrocarbons and chlorinated solvents. Additionally, several of these systems required preparation of NPDES and air discharge permits.
- Managed 20 FTEs and an annual budget of \$1.5 million.
- Developed several major clients including Kerr-McGee Petroleum Co. and the State of Tennessee Department of Finance and Division of Underground Storage Tanks. This client development led to over \$1 million in projects. Obtaining State of Tennessee contracts involved preparation of proposals and bid packages, and contract negotiations.

Staff Engineer

- Prepared over 40 Spill Prevention Countermeasure and Control Plans (SPCC) for CONOCO Petroleum in Florida, Louisiana, North Carolina, South Carolina, Tennessee, and West Virginia. This resulted in maintaining CONOCO's environmental compliance with a savings of over \$120,000.
- Developed several clients including Roadway Trucking, Dupree Oil Company and ASTEC manufacturing for over \$500,000 of projects. Projects included subsurface investigations of several sites impacted by releases of petroleum hydrocarbons and chlorinated solvents and the design and installation of various site-specific remediation plans and systems.

ARCO OIL AND GAS COMPANY – Lafayette, Louisiana

1990 to 1991

Engineer

- Prepared a detailed proposal for the dismantling and cleanup of a lean oil gas plant.
- Performed reservoir studies to develop significant offshore (South Pass, LA) oil reservoirs and presented development plans to management.
- Directed a project to replace an aging offshore quarters package. This project involved preparing and presenting a \$2.5 million proposal to ARCO management. The project was accepted saving ARCO over \$3 million.
- Developed testing and reporting procedures according to API Guidelines and Minerals Management Service regulations for all safety devices on the process equipment on a new \$65 million offshore platform.
- Supervised field operations for two producing oil and gas fields in South Louisiana. Assembled and administered a \$1.2 million lease operating budget.
- Planned and directed the dismantling, demolition, cleanup and surface (soil) remediation of several oil and gas production sites, and an out of service gasoline plant. These projects required the identification and removal of petroleum hydrocarbon impacted soil, asbestos, heavy metals, various chlorides, DNAPLs, and naturally occurring radioactive materials. These facilities were closed without delays or expenses resulting in overall savings to ARCO of approximately \$500,000.

ACADEMIC BACKGROUND*Master of Science, Petroleum Engineering, Texas A&M University**Bachelor of Science, Petroleum Engineering, Texas A&M University***CERTIFICATIONS**

Tennessee Professional Geologist #3561

Tennessee Professional Engineer #100844

Georgia Professional Engineer #PE023689

Alabama Professional Engineer #21757

AFFILIATIONS

National Society of Professional Engineers

Association of Groundwater Scientists and Engineers

National Water Well Association

Society of Petroleum Engineers

JERRY W. STEWART, P.E.

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Chattanooga, TN 37405
(423) 757-5026
stewart_j@mail.chattanooga.gov

EDUCATION

High School Diploma, 1964

Petal High School, Petal Mississippi

Pre-Engineering Studies, 1964-1966

University of Southern Mississippi, Hattiesburg, Mississippi

B.S. Civil Engineering, 1969

Mississippi State University, Mississippi State, Mississippi

M.S. Environmental Engineering, 1970

Mississippi State University, Mississippi State, Mississippi

Wastewater Operator Short course Certificate, 1986

California State University-Sacramento, Sacramento, California

EXPERIENCE

City of Chattanooga, 7/2001-Present

Director, Waste Resources Division, Department of Public Works

- Responsible for the management, operations, and maintenance of the Interceptor Sewer System, City Landfill, and Wood Recycling Center
- Responsible for 150± employees and O&M budget of \$20 million±

City of Chattanooga, 7/1990-7/2001

Plant Superintendent, Waste Resources Division

- Responsible for the management, operations and maintenance of the 140mgd Moccasin Bend WWTP, 61 wastewater pump stations, 6 storm water pump stations, and 6 CSO facilities (2 are under construction)
- Responsible for 63± employees and an O&M budget of \$11.5 million±
- Scheduled work of employees; coordinated work of on-site contractors; coordinated with consultants; oversaw and participated in activities involving employees, including interviews and disciplinary activities
- Evaluated new chemicals, equipment and treatment processes; optimization of unit processes
- Responded to customer complaints related to odors; trouble shot problems with variations in incoming wastewater
- Coordinated with and prepared reports for regulatory agencies
- Coordinated mechanical, electrical, ground and building maintenance at plant and other facilities; and developed specifications and plans for assigned projects

City of Chattanooga, 5/1985-7/1990

Assistant Superintendent-Operations, Waste Resources Division

- Responsible for the management and operations of the 65mgd Moccasin Bend WWTP and 30± wastewater pump stations, and 4 storm water pump stations
- Scheduled work of employees; oversaw and participated in activities involving employees, including in-house training programs, interviewing, and disciplinary activities; coordinated with consultants
- Evaluated new chemicals, equipment, and treatment processes
- Trouble shot problems with variations in incoming wastewater
- Coordinated with and prepared reports for regulatory agencies
- Coordinated buildings and grounds maintenance for plant and pump stations; and developed plans and specifications for assigned projects

Hensley-Schmidt, Inc., 9/1970-5/1985

Project Engineer and/or Project Manager on City of Chattanooga projects

- Start-up engineer on 1970 Moccasin Bend WWTP plant expansion to 42mdg secondary treatment process
 - Assisted city personnel with start-up activities and optimization of new unit processes; assisted with the collection and analysis of data
 - Coordinated on-site activities of process suppliers and city personnel; developed plant O&M manual
- Project Engineer on area wide 201 Wastewater Facility Plan for the Chattanooga-Hamilton County Tennessee-Georgia planning area
 - Field engineer in charge of 500 industry industrial waste survey. Included sampling of 130± discharges. Prepared report
 - Field engineer in charge of process pilot studies for proposed upgrade of Moccasin Bend WWTP. Pilot studies included the high purity oxygen activated sludge process, rotating biological contractors, and filter presses. Supervised waste characterization studies on influent wastewater to determine oxygen transfer rates and toxicity to biological nitrogen removal
 - Assisted in the writing of the engineer design report for the expansion of the Moccasin Bend WWTP to 65mdg high tech secondary treatment process
 - Prepared O&M manuals for liquids and solids expansion of Moccasin Bend WWTP to 65mdg
- Project Engineer responsible for performing annual field inspection of all ISS facilities for bondholders
- Project Manager for Phase I and Phase II Chattanooga-Hamilton County solid waste to energy studies
 - Duties included field collection of solid waste generation rates and solid waste characterization studies
 - Coordinated and prepared reports

Other

- Project Engineer involved in wastewater sampling and characterization studies for acquiring NPDES permits for numerous industrial clients
- Project manager involved in developing solid waste management plants for St. Tammany Parish, LA

- Project Manager involved in collection of solid waste generation rates and characterization for New Orleans, LA Metropolitan planning agency

AFFILIATIONS

Water Environment Federation: Kentucky-Tennessee Water Environment Association

- President 1996
- Board of Directors 1992-1997
- Quarter Century Operator Clubs Committee
 - Chair -1997 - President
- KY-TN 5-S Committee
 - Chair - 2001
- Local Awards Committee
 - Co-Chair - 2001-Present
- Membership Committee - 1990-Present
- Local Arrangement Committee
 - Co-Chair - 1990

Tennessee Water and Wastewater Association

- Chairman Lower East Section - 1993-1994
- Board of Directors
- Awards Committee Chairman

Tennessee Water Quality Management Association

- Awards Committee

Hixson Kiwanis Club

- President - 1980
- Secretary - 1995-2000
- Board of Directors
- Lt. Governor Division 3, Kentucky-Tennessee District, Kiwanis International 1981

AWARDS

Kentucky-Tennessee WEA

- WEF Hatfield Award for Operating Wastewater Plant - 1996
- WEF Bidell Award for Service to the association - 1998
- 5-S Society for Service to the Association - 1990
- S. Leary Jones Hall of Fame Award - 2000
- Quarter Century Operators Club - 1996

Tennessee Water and Wastewater Association

- M.L. Brickey Award - Contributions to Wastewater field - 1988

Tennessee Water Quality Management Association

- Outstanding Service to Wastewater Field - 1996

David A. Wilson E.I.T.

PROFESSIONAL EXPERIENCE

1999 to present	Sewer Engineering Specialist	City of Chattanooga, Tennessee
1986 to 1999	I & I Rehabilitation Engineer	City of Chattanooga, Tennessee
1984 to 1986	Plant Operating Engineer	City of Chattanooga, Tennessee

EDUCATION

B.S. Civil Engineering, Tennessee Technological University, 1984

PROFESSIONAL REGISTRATIONS

Engineer in Training - Tennessee
Collection System Operator Class II - Tennessee
Waste Water Treatment Plant Operator Class IV – Tennessee

PROFESSIONAL ASSOCIATIONS

National Society of Professional Engineers
American Society of Civil Engineers
Water Environment Federation