



Roger W. Griffith, P.E.

Jefferson City, Tennessee

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Curriculum Vitae

FORENSIC ENGINEERING EXPERT PROFILE

Roger W. Griffith, P.E., is a forensic mechanical engineer specializing in failures of building mechanical systems, including carbon monoxide exposure, fuel gas leaks and explosions, and hot water scalding incidents.

His opinions are developed using repeatable, standards-based forensic engineering methodologies consistent with professional engineering practice, including the interpretation of codes and standards, and the analysis of real-world system performance. His opinions are intended to be clear, objective, and technically defensible.

In addition to formal continuing education, Mr. Griffith routinely reviews applicable codes, standards, and technical literature, and maintains subject-organized reference notes as part of his regular engineering practice. He maintains a documented, ongoing review of NFPA 54 (National Fuel Gas Code), the ICC Plumbing Code, and the ICC Fuel Gas Code, including committee statements and technical guidance related to carbon monoxide risk, fuel gas safety, and hot water system requirements.

Mr. Griffith has been retained in over 125 forensic investigations and provides independent expert analysis and testimony for both plaintiff and defense counsel in state and federal courts. Mr. Griffith is an active member of the NFPA 54 National Fuel Gas Code Technical Committee and has served on multiple national committees addressing plumbing and mechanical standards.

FORENSIC AREAS OF EXPERTISE

Carbon Monoxide (CO) Exposure

- Residential and commercial CO exposure investigations
- Combustion appliance, venting, and exhaust failures
- Combustion air deficiencies and backdrafting analysis

Fuel Gas Incidents

- Natural gas and propane leaks, fires, and explosions
- Fuel gas piping design, installation, testing, and purging failures
- Ignition source and fire spread analysis



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Hot Water Scalding

- Forensic analysis of domestic hot water system failures
- Healthcare, multi-family, and residential scald injury cases

LICENSURE AND CERTIFICATIONS

Licensed Professional Engineer (P.E.) – Multi-State Licenses (32 states) – see Appendix A
Board Certified in Forensic Engineering (NAFE), 2016.

CODES, STANDARDS, & COMMITTEE INVOLVEMENT

Mr. Griffith has participated directly in the development of national safety standards governing fuel gas systems, combustion appliances, water temperature control, and Legionella risk management. As an HVAC and plumbing design engineer with over 25 years of experience, Mr. Griffith has extensive experience in understanding, applying, and interpreting applicable codes and standards. He has served on numerous code and standard committees, as listed below.

- National Fire Protection Association (NFPA) 54 - *National Fuel Gas Code*
 - Technical Committee member (2016 - present).
 - Contributed to the development and revision of national fuel gas safety requirements governing gas piping systems, appliances, combustion air, and venting.
- American Society of Plumbing Engineers (ASPE) Technical Standard 15 – Hot Water Temperature and Control
 - Committee Member (2009–2010).
 - Hot water temperature control and scald prevention standards.
- American Society of Sanitary Engineers (ASSE) Scald Awareness Task Group
 - Task Group member (2015 – present)
 - The purpose of this task group was to raise awareness among the public and the plumbing community about potential scalding issues related to plumbing systems. The task group published numerous white papers on this topic.
- ASSE 1082 / 1084 / 1085 Working Groups
 - Development of tankless water heater standards for system, point-of-use, and emergency fixture applications.
- International Association of Plumbing Mechanical Officials (IAPMO) Uniform Mechanical Code (UMC) / Uniform Plumbing Code (UPC) Legionella Task Groups (2020-2021)
 - Contributor to UPC Appendix N and UMC Appendix H addressing water temperature, scald prevention, and Legionella risk.



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- IAPMO Technical Committee for Construction Practices for Potable Water Guideline Task Group
 - Committee Member (2022-2025).
 - This standard is to guide contractors and subcontractors in installing and managing premise plumbing systems during construction to minimize the risk of Legionella and other waterborne pathogens.
- International Code Council (ICC) Plumbing, Mechanical, and Gas Code Action Committee (PMGCAC)
 - Committee Member (2017-2019).
 - Contributed to the PMGCAC's reviews and revision proposals to the International Plumbing, Mechanical, Fuel Gas, Private Sewage Disposal, Swimming Pool, and Spa Codes, as well as chapters 12 through 33 of the International Residential Code.

PUBLICATIONS AND PRESENTATIONS

Co-author of multiple industry ASSE white papers on scald hazard prevention.

- *Adjustment of Automatic Compensating Valves to Prevent Potential Scald Hazards*
- *Guidelines for Temperature Control Devices in Domestic Hot Water Systems*
- *Recommended Installation Practices for Residential Storage-Type Water Heaters To Reduce the Danger of Scalds*
- *Recommended Installation Practices for Residential Tankless Water Heaters to Reduce the Danger of Scalding*

LITIGATION EXPERIENCE

- Retained by plaintiff and defense counsel (over 125 cases).
- State and federal court matters
- Expert depositions, trials, and arbitration testimonies (over 30 sworn testimonies).
- Product liability, premises liability, and professional negligence claims

PROFESSIONAL EXPERIENCE

Professional Practice Structure

Mr. Griffith has practiced as a consulting mechanical engineer and forensic engineer through both Griffith Engineering & Consulting, Inc. (a Tennessee professional corporation) and, where required by licensure or jurisdiction, as a sole proprietor under his own name. These entities reflect business structure and jurisdictional requirements rather than different scopes of practice. Across both, Mr. Griffith has performed substantially the same engineering design, forensic investigation, and expert witness services described below.



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- 2002 - present **Roger W. Griffith, P.E.**
Consulting & Forensic Engineer- (Sole Proprietor, Multi-state Practice)
- Forensic engineering investigations, litigation support, and expert witness services related to the design, installation, maintenance, or operation of building mechanical and plumbing systems, including mechanical (HVAC) and plumbing system failures, carbon monoxide exposures, fuel gas explosions, and hot water scalding. Testified as an expert witness at numerous depositions, trials, and mediation/arbitration hearings.
 - Designs mechanical, plumbing, and sprinkler systems for residential, commercial, and industrial projects.
- 1997 - Present **Griffith Engineering & Consulting, Inc.**
Owner & Principal Engineer (Tennessee-Based Practice)
- Designs mechanical, plumbing, and sprinkler systems for residential, commercial, and industrial projects within Tennessee.
 - Forensic engineering investigations and litigation support related to building mechanical (HVAC) and plumbing system failures, carbon monoxide exposures, fuel gas explosions, and hot water scalding.
- 2014-2016 **Mesa Associates and Retiree Resource Corporation**
Mechanical Engineering Consultant
- Process piping engineer for bottom ash dewatering projects at the Tennessee Valley Authority fossil plants.
- 1983-1997 **Tennessee Valley Authority**
- Mechanical engineering, maintenance supervision, and quality management.
 - Failure analysis of boilers, heat exchangers, piping, and valves.
 - Root cause analysis and reliability improvement initiatives.

EDUCATION

Bachelor of Science in Mechanical Engineering, *Magna Cum Laude*, from Tennessee Technological University in Cookeville, Tennessee. June 4, 1983.

HONORS, ACADEMIC DISTINCTION, & PROFESSIONAL SERVICE

- HVAC Consultant, University of Tennessee, College of Architecture (2017–2019)
- Washington Internship for Students of Engineering (WISE), Congressional program (1982)
- Tau Beta Pi, Engineering Honor Society
- Pi Tau Sigma, Mechanical Engineering Honor Society
- Phi Kappa Phi, Collegiate Honor Society



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** This Curriculum Vitae is provided for informational purposes and shall not be used for expert designation absent an executed agreement.*

Updated January 31, 2026



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Appendix A

Multi-State Licensure – State List

Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, and Wisconsin.