

Curtis Anderson, PE | Mechanical Engineer, National Service Line
Principal

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Professional Summary:

Mr. Anderson is a licensed Professional Engineer in multiple jurisdictions throughout the United States. In addition to his experience in engineering forensics, he also has four years in the heavy-duty truck manufacturing industry designing various components for cab interiors. He has given presentations on various topics in the realm of mechanical engineering forensics and been a registered professional engineer since 2018.

Mr. Anderson has completed investigations of losses including residential/commercial plumbing, HVAC systems, fires, vehicle collisions, and injuries caused by product failures or workplace safety deficiencies. These investigations have ranged from small and multi-million dollar losses, and unfortunately, losses involving injuries and fatalities. He is well-versed in research, analysis, and interpretation of codes and standards for mechanical, fire protection, and other building systems.

Mr. Anderson also has experience with a variety of laboratory equipment used in forensic investigations, including scanning electron microscopy with elemental dispersive spectroscopy, Fourier transform infrared spectroscopy, X-ray, and stereoscopic microscopy.

Mr. Anderson's expertise includes:

- Mechanical equipment failure analysis
- Water losses and plumbing failures
- Failure analysis of appliances and plumbing fixtures
- Failure analysis of residential and commercial HVAC systems
- Water-based fire protection systems
- Gas-fed fire and explosion investigations
- Vehicle fires
- Accident investigation for commercial and passenger vehicle collisions
- Event data recorder (EDR) crash data retrieval and analysis
- Tire failure analysis
- Trip and fall injuries
- Personal injury investigations
- Plastics manufacturing
- Equipment restoration consulting following water/fire exposure
- Code and standard analysis and interpretation

Licenses and Certifications:

Professional Engineer (Additional states available upon application):

Alabama, 50827	Mississippi, 33190
Arkansas, 18817	New Mexico, 28077
California, M 42531	North Carolina, 059217
Colorado, 61161	South Carolina, 43343
Florida, 93532	Oklahoma, 31067
Georgia, PE053011	Texas, 132160
Kansas, 28830	Wyoming, 19173
Louisiana, 43583	

National Engineering Registration, NCEES, 14-896-69

FAA Part 107 Small Unmanned Aircraft Systems (sUAS) Remote Pilot Certification, 4676707

Project Experience:

The sample projects here outline a small sampling of the types of projects and losses Mr. Anderson regularly investigates. For further information or additional examples, please contact EFI Global.

Insurance Client, Oklahoma Residential Fire Loss

Identified multiple violations of the International Plumbing Code (IPC) with the installation of a water heater in the area of origin during site inspection with a fire origin & cause investigator. Site observations, witness interviews, and destructive lab examination of the water heater showed the fire had been caused by improper installation.

Insurance Client, Texas Large Commercial Water Loss

Investigated numerous water losses from multiple sites in a regional hospital network alleged to be caused by a freezing weather event. Identified various maintenance or operator errors in building heat and automated freeze prevention systems that contributed to many of the leak origins, as well as differentiated between leaks caused by freezing versus other modes of failure.

Insurance Client, Texas Luxury Vehicle Fire

Fire investigation of new luxury high-performance hybrid vehicle that had experienced multiple errors requiring service at the dealership prior to a fire event. Identified cause of fire and discovered dealership had been misdiagnosing the earlier faults and performing inadequate repairs.

Project Experience (Continued):

Property Management Client, Texas

Commercial Water Loss and HVAC Ventilation Assessment

Initially tasked with determining the cause of frequent water leaks from a wet fire suppression system installed in a multi-tenant warehouse/office space. Evidence and laboratory testing identified the cause to be microbial induced corrosion (MIC) exacerbated by recent tenant space buildouts. During investigation, observed issues with chemical storage in a pool supply warehouse and a neighboring tenant later reported excessive chemical odors. Documentation of HVAC systems identified violations of various codes and standards for hazardous chemical storage. Provided recommendations to the client for modifications to the building's ventilation system and storage practices.

Insurance Client, Texas

Workplace Injury

Performed an inspection of a warehouse facility in relation to an injury involving conveyor systems. Identified violations of multiple OSHA standards regarding equipment guarding, employee supervision, and actions by the injured party that contributed to the incident.

Insurance Client, Texas

Vehicle Accident Reconstruction

Driver alleged a passing vehicle clipped their front left tire, causing them to lose control into a ditch. Visual examination of the vehicle and imaging of the vehicle's Event Data Recorder using a Bosch crash data retrieval tool revealed the driver was traveling in excess of the posted speed limit, and data was consistent with a driver loss of control and overcorrection.

Insurance Client, Florida

Vehicle Accident Reconstruction Involving Automation Systems

Driver of a rental car alleged that the vehicle's brakes automatically engaged, causing another vehicle to collide with their rear. The vehicle's event data recorder was imaged using a Bosch crash data retrieval tool and the Toyota Techstream software. Analysis of the data revealed the collision avoidance system and brakes properly functioned as the vehicle approached stopped traffic at a high rate of speed.

Insurance Client, Oklahoma

Large Equipment Water Exposure Loss

Tasked with identifying quantity of equipment affected by tornado damage to the warehouse of an electronics manufacturer. Claimed scope of damaged equipment included >32,000 products totaling over \$14M in losses. Led a rotating team of 15 engineers and adjusters for site evaluations over 4+ weeks to document equipment exposure and coordinated with contractors to create a restoration plan for the remaining equipment.

Expert Witness Testimony: Court Qualifications/Depositions/Testimony:

**List of Expert Witness Testimony Experience is Available Upon Request*

Professional Experience:

EFI Global, Mechanical Engineer – National Service Line Principal (current title), 2020 – Present

Goodson Engineering, Forensic Mechanical Engineer, 2018 – 2020

Peterbilt Motors, Design Engineer, 2014 – 2018

Formal Education:

Bachelor of Science, Mechanical Engineering, University of Texas at Dallas, Richardson, Texas, 2014

Specialized Education/Training:

Residential HVAC System Design – Manual J, RightTek/ACCA, 2025
Residential HVAC System Design – Manual S, RightTek/ACCA, 2025
Residential HVAC System Design – Manual D, RightTek/ACCA, 2025
Residential HVAC System Design – Quality Installation, RightTek/ACCA, 2025
Trip & Fall Investigations, EFI Global, 2025
Post Loss Equipment Evaluations, EFI Global, 2024
Advanced Tire Forensics, Tennent & Associates, 2023
Diesel Engine Fundamentals, 2023
Florida Advanced Building Code Changes 2020, 2023
Bosch CDR Tool Technician Training, IPTM, 2022
Essentials of Heating and Cooling Buildings, 2022
Mechanical Systems Commissioning, 2022
Chillers, Refrigerant Compressors, and Heating Systems, 2021
Introduction to Mechanical Components, 2021
Fundamental Techniques of Crash Investigation, IPTM, 2020
Documenting the Event, CFITrainer, 2020
Impact Failure of Plastics, SPE, 2020
Residential Natural Gas Systems, CFITrainer, 2020
Arc Mapping Basics, CFITrainer, 2020
Introduction to Evidence, CFITrainer, 2020
Introduction to Appliances, CFITrainer, 2020
Motor Vehicles: The Engine and the Ignition, Electrical, and Fuel Systems, CFITrainer, 2020
UV Effects on Plastics, SPE, 2020
Fourier Transform Infrared Spectroscopy in the Failure & Compositional Analysis, SPE, 2020
Investigating Motor Vehicle Fires, CFITrainer, 2020
Understanding Undetermined, CFITrainer, 2020
Ethics and the Fire Investigator, CFITrainer, 2020
The Practical Application of the Relationship Between NFPA 1033 and NFPA 921, CFITrainer, 2020
NFPA 1033 and Your Career, CFITrainer, 2020
International Fire, Arson, and Explosion Investigation Training Program, NAFI, 2019

Specialized Education/Training (Continued):

Fundamentals of Residential Building Construction, CFITrainer, 2019
Residential Electrical Systems, CFITrainer, 2019
Basic Electricity, CFITrainer, 2019
Failure Associated with Injection Molding, SPE, 2019
Fire Flow Analysis, CFITrainer, 2019
Fire Chemistry, CFITrainer, 2019
Degradation Failure of Plastics, SPE, 2019
Introduction to Design for Rotational Molding, SPE, 2019
Understanding Failure Rate in Plastic Components, SPE, 2019
Motor Vehicles: Transmission, Exhaust, Brake, and Accessory Systems, CFITrainer, 2019
Basic Rubber Technology, SPE, 2019
Creep Failure of Plastics, SPE, 2019
Critical Evaluation and Testing of Commonly Reported Accidental Causes, CFITrainer, 2019
Critical Thinking Solves Cases, CFITrainer, 2019
Understanding Fire Through the Candle Experiment, CFITrainer, 2019
Investigation of Gas and Electric Appliance Fires, Fire Findings, 2018
The Scientific Method for Fire and Explosion Investigation, CFITrainer, 2018

Affiliations:

Member, Society of Plastic Engineers
Member, National Association of Fire Investigators
Member, National Fire Protection Association

Courses Instructed/Guest Lecturer:

Flood: Investigating Residential Water Losses
Hot Surface Ignition
Introduction to HVAC Inspections for Adjusters
Introduction to Working with Experts for New Adjusters
Water Heater Fire and Water Loss Investigations

Publications:

Anderson, Curtis & Baisch, Chris. "Dramatic Growth in the Veterinary Market – and What Property Carriers Need to Know About It" EFI Global/Sedgwick, 2023.