

Patrick Kettenring | Senior Fire Investigator, IAAI-CFI

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Professional Summary:

Mr. Kettenring is a 28-year veteran of the fire service, retiring in 2009 as an Assistant Chief. Patrick extended his fire service career as a Deputy Fire Marshal/Fire Investigator for a metropolitan county Fire Marshal's Office for an additional 7 years. He also worked with a national forensics engineering and consulting firm as a Fire Investigator, then for an insurance company, again as an investigator. Patrick has a degree in Fire Investigations, as well as Fire Command and Administration.

Patrick has also been Post-Blast Explosion certified through the Department of Justice Federal Bureau of Investigations. Patrick previously held IBC, IFC, and IRC certifications and had performed structural and fire protection plan reviews and field inspections. Of Mr. Kettenring's 37-year career, he has spent 16 years investigating fire and explosions.

- Commercial and residential fire and explosion losses
- Heavy equipment, marine equipment, and vehicle fires
- Mid-stream energy facilities for oil and gas industries

Patrick has been qualified and accepted as an expert witness in the State of Washington Judicial Court System, as well as United States District Court for the Western District of Washington.

Patrick has served as an Instructor for the Washington State Fire Training Academy, the Pierce County (WA) Fire Marshal's Office, the City of Tacoma (WA), the City of Phoenix (AZ), and at the Post-Blast Explosion School (WA) for the Federal Bureau of Investigations.

Licenses and Certifications:

Certified Fire Investigator (IAAI-CFI), International Association of Arson Investigators, Certification #21-122026

Certified Fire and Explosion Investigator (CFEI), National Association of Fire Investigators, Certification #15157-8423

Certified Vehicle Fire Investigator (CFEI-V), National Association of Fire Investigators, Certification #15157-8423v

Project Experience:

Hydraulic Fracturing Facility, North Dakota Explosion with fire

Conducted an origin and cause investigation of a horizontal boring operation that breached a natural gas storage facility.

Hot Mix Asphalt Plant explosion, Texas

Conducted an origin and cause investigation of an explosion at an asphalt hot-mix facility with the loss of a 1,000,000-gallon storage tank and product.

Regional Airport Hanger Fire, Washington

Conducted an origin and cause investigation of a fire at a commercial airport hangar that resulted in the loss of an aircraft, additional vehicles, and the Hanger.

Professional Experience:

EFI Global /Unified Investigations and Sciences, Inc., Senior Fire Investigator, May 2017-Present
Energi Insurance Services Inc., Technical Investigator, 2015-2017
Rimkus Consulting Group, Inc., Senior Fire Investigator, August 2014-September 2015
Pierce County Fire Marshal's Office, Deputy Fire Marshal, 2009-2014
South King Fire & Rescue, Assistant Chief of Planning, Logistics, and Special Projects, Assistant Chief of Operations, Assistant Chief of Special Operations, Shift Battalion Chief, Chief of Training, Fire Marshal, 1981-2009

Specialized Education:

Fire Flow Analysis, CFI Trainer, 2022
NFPA 1033 & 921: 2022/2021 Edition Updates, CFI Trainer, 2022
Introduction to Appliances, CFI Trainer, 2022
Critical Evaluation and Testing of Commonly Reported Accidental Causes, CFI Trainer, 2022
Discovery in Criminal Cases, CFI Trainer, 2022
Emerging Technologies in Fire Investigation, CFI Trainer, 2022
Understanding Undetermined, CFI Trainer, 2022
Mississippi Fire Investigators Fall Seminar 2021 (20 hours)
Arizona Advanced Fire Investigation Seminar, CFITrainer.net, IAAI, 2018
Thermometry, Heat, and Heat Transfer, CFITrainer.net, IAAI, 2017
Discovery in Civil Cases, CFITrainer.net, IAAI, 2017
Fire Chemistry, CFITrainer.net, IAAI, 2017
Residential Electrical Systems, CFITrainer.net, IAAI, 2017
HAZWOPER Refresher Training, Safety Unlimited, Inc., OSHA Regulation 29 CFR 1910.120(e) & (p), 2017
Asbestos Awareness Training, Safety Unlimited, Inc., 29 CFR 1910.1001(j)(7), 29 CFR 1915.1001(k)(9), 29 CFR 1926.1101(k)(9), 40 CFR Part 763 Subpart G, 2017
NFPA 921: Origin and Cause Analysis Involving Appliances, Energi Insurance Services, 2017
Anatomy of a Kitchen Fire, CFITrainer.net, National Fire Investigator Journal, 2016
Ethical Duties Beyond the Fire Scene, CFITrainer.net, 2016
The Deposition Part 2: Questioning Tactics and Effective Responses, CFITrainer.net, 2016
The Deposition Part 1: Format, Content and Preparation, CFITrainer.net, 2016
Process of Elimination, CFITrainer.net, 2016
Residential Natural Gas Systems, CFITrainer.net, 2016
Investigating Natural Gas Systems, CFITrainer.net, 2016
Communicating the Value of Membership in the IAAI, CFITrainer.net, 2016
Gas/Vapor Combustion Explosions, Energi Insurance Services, 2015
Marine Fire Investigations, Energi Insurance Services, 2015
Legal Considerations During the Investigation, Rimkus Consulting, 2015

NFPA 921: Fuel Load, Fuel Packages and Properties of Flames, Rimkus Consulting, 2015
NFPA 58 Liquefied Petroleum Gas Code, Rimkus Consulting, 2015
NFPA 54 National Fuel Gas Code, Rimkus Consulting, 2015
NFPA 77 Recommended Practice on Static Electricity, Rimkus Consulting, 2015
ASTM E1188: Standard Practice for Collection and Preservation of Information and Physical Items by a Technical Investigator, Pierce County Fire Marshal's Office, 2014
ASTM E860: Examining and Preparing Items That Are or May Become Involved in Criminal or Civil Litigation, Pierce County Fire Marshal's Office, 2014
Investigating HMA Plant (Asphalt) Fires, Pierce County Fire Marshal's Office, 2014
Anatomy of an Arson Prosecution, Tacoma Police Department, Tacoma, Washington, 2014
Basic Electricity, CFITrainer.net, 2014
The HAZWOPER Standard, CFITrainer.net, 2014
The Practical Application of the Relationship Between NFPA 1033 and NFPA 921, 2014
2011 NFPA 921 Changes, CFITrainer.net, 2014
Preparation for the Marine Fire Scene, CFITrainer.net, 2014
Ethics and Social Media, CFITrainer.net, 2014
DNA, CFITrainer.net, 2014
Improvised Explosive Device Awareness, Tacoma Police Department, Tacoma, Washington, 2013
Physical Evidence at the Fire Scene, CFITrainer.net, 2013
Motive, Means, and Opportunity: Determining Responsibility in an Arson Case, CFITrainer.net, 2013
NFPA 1033 and Your Career, CFITrainer.net, 2012
Managing Complex Fire Scene Investigations, CFITrainer.net, 2012
How First Responders Impact the Fire Investigation, CFITrainer.net, 2012
Using Resources to Validate Your Hypothesis, CFITrainer.net, 2012
MagneTek: A Case Study in the Daubert Challenge, CFITrainer.net, 2012
Fire Protection Systems, CFITrainer.net, 2012
Fundamentals of Residential Building Construction, CFITrainer.net, 2012
Fundamentals of Interviewing, CFITrainer.net, 2012
A Ventilation-Focused Approach to the Impact of Building Structures and Systems on Fire Development, CFITrainer.net, 2012
Writing the Initial Origin and Cause Report, CFITrainer.net, 2012
Ethics and the Fire Investigator, CFITrainer.net, 2012
Introduction to Evidence, CFITrainer.net, 2012
Investigating Fatal Fires, CFITrainer.net, 2012
Explosion Dynamics, CFITrainer.net, 2011
Critical Thinking Solves Cases, CFITrainer.net, 2011
Insurance and the Fire Investigation, CFITrainer.net, 2011
Electrical Safety, CFITrainer.net, 2011
Investigating Motor Vehicle Fires, CFITrainer.net, 2011
Fire Investigator Scene Safety, CFITrainer.net, 2011
Digital Photography and the Fire Investigator, CFITrainer.net, 2011
Evidence Examination: What Happens at the Lab?, CFITrainer.net, 2011
Search and Seizure, CFITrainer.net, 2011
Fire and Explosion Investigations: Utilizing NFPA 1033 and 921, CFITrainer.net, 2011
Fire Pattern Recognition and Identification, Public Agency Training Council, 2010
Hands-on Electrical Fire/Arson Investigation, Public Agency Training Council, 2010
Documenting the Event, CFITrainer.net, 2010
Post-flashover Fires, CFITrainer.net, 2010
The Scientific Method for Fire and Explosion Investigation, CFITrainer.net, 2010
Introduction to Fire Dynamics and Modeling, CFITrainer.net, 2010

Education:

Associates Degree Fire Investigations, Bellevue College, Bellevue, Washington, 2001-2002
Associates Degree Fire Command and Administration, Bellevue College, Bellevue, Washington, 2003-2004

Affiliations:

International Associations of Arson Investigators (IAAI)
National Association of Fire Investigators (NAFI)
Arizona Chapter, International Association of Arson Investigators

Courses Instructed/ Guest Lecturer:

Incendiary Fire Investigations, Instructor, 3 hours, Phoenix (AZ) Fire Training Academy
Basic Fire Investigation Techniques, Instructor, 8 hours, Phoenix (AZ) Fire Investigation Division
Vehicle Fire Investigation, Instructor, 6 hours, Hattiesburg (MS) Police and Fire Training Academy
NFPA 921 and 1033
Origin and Cause Investigations
Fire Behavior
Writing the Initial Origin and Cause Report
Lithium, Lithium-ion, and Lithium-polymer Battery Fire Investigations
Post-Blast Scene Investigations
Fire Investigations for Law Enforcement Personnel
NFPA 58 Liquefied Petroleum Gas Code
NFPA 54 National Fuel Gas Code
ASTM E1188: Standard Practice for Collection and Preservation of Information and Physical Items by a Technical Investigator

**Litigation CV available upon request.