

Capabilities

FRA staff has extensive capabilities in fire and explosion investigation and reconstruction including the following:

- ✦ Cause & Origin Analysis
- ✦ Code Analysis
- ✦ Fire Modeling & Spread
- ✦ Differential Damage Assessment
- ✦ Lithium-Ion Battery Failures
- ✦ Fire Suppression Systems
- ✦ Fire Detection & Alarm Systems
- ✦ Gas Leak Dispersion Modeling
- ✦ Explosions & BLEVE
- ✦ Industrial Fires & Explosions
- ✦ Material Flammability Testing
- ✦ Bench, Medium, & Large-Scale Fire Testing
- ✦ Fire & Explosion Reconstruction
- ✦ Wildland Fires
- ✦ Product Failure & Defects
- ✦ Smoke Detector & CO Detector Activation Analysis
- ✦ Dust Hazard Analysis
- ✦ Electrical System Analysis
- ✦ Fire Injury & Death, Toxicology, and Burn Analysis
- ✦ Process Failure



FIRE & RISK ALLIANCE

About Us

Fire & Risk Alliance is a leader in fire and risk engineering. Our staff is composed of highly trained and educated engineers and scientists that focus on developing optimized solutions for our clients throughout the world. Our hands on practical experience, active engagement in the industry, and our applied research ensure that we provide state of the art solutions to our clients.



Field Investigation and Analysis

Our incident investigators are highly educated and experienced individuals who have participated in many high profile investigations in the US and internationally. We provide cause & origin investigations, explosion investigation services, forensic reconstructions, business interruption consulting, and loss control services. We utilize state of the art technology to capture relevant information in the field, ensure that all the evidence is properly documented and accounted for, and conduct fire reconstructions simulations using state of the art computer modeling tools.

We are experienced at leading, interacting and cooperating with an organization's internal investigative team and have served as expert witnesses at the local, state, and federal level. Our team has licensed professional engineers, certified fire and explosion investigators, and skilled support staff to support your case.



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Project Experience

- BP Texas City Explosion
- Assisted Living Facility Fire
- Wood-Frame Multi-Use Fire
- Buncefield Fire & Explosion
- Utility Substation Fire
- Pipe Freeze and System Failure
- Highrise Building Fire Fatality
- Multiple Fatality Residential Fire
- Refinery Smoke and Radiation Modeling

Experts

- Fire Protection Engineers
- Licensed Investigators
- Industrial Engineers
- Mechanical Engineers
- Electrical Engineers
- GIS & Data Scientists
- Wildland Fire Experts

Contact

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Or visit us on the web to see our complete range of services

Forensics & Expert Witness Support

Fire, Egress, and Explosion Modeling

Our staff are experts in the use of zone, CFD, specialty egress, and explosion models and have investigated some of the largest incidents around the world over the past 15 years. We apply the latest in forensic science and state of the art tools to aid in our investigation and reconstruction of the incident.

Material flammability, ventilation, fire suppression and other building systems may impact the fire growth. Understanding the interaction of these systems is essential to understanding how and why the damage occurred and what may have been the culprit. Often an analysis is performed to determine what conditions led to the loss, regardless of what the initial cause of the fire was and FRA leverages computational tools to support these types of analysis.

Laboratory and Specialized Testing

FRA maintains a fire and wet lab at its Rockville, MD office that is equipped with standard and specialized test apparatus including state of the art spray characterization, gas dispersion testing, and fire testing capabilities. We provide custom test design aimed at supporting specific client needs.

Additionally our staff is involved in the development of many national and international codes and standards and sit on numerous technical committees for NFPA, SFPE, ASTM, and others.

