



## Advanced Engineering Investigations

### **JOHN M. (JAY) FREEMAN, JR., MS, PE**

Mr. Freeman has over 44 years of forensic experience and is a nationally recognized engineer specializing in gas appliances and natural gas and propane explosions. He is an expert in carbon monoxide poisonings, flammable liquid fires, and explosions. He has testified in state district courts and United States District Courts throughout the United States. Mr. Freeman is a Founder of AEI Corporation and a Senior Project Engineer.



#### **LICENSURE & EDUCATION**

Licensed Professional Engineer in Arkansas and Colorado  
MS, Mechanical Engineering, University of Denver, 1973  
BS, Mechanical Engineering, University of Denver, 1969  
Certified in Hazardous Waste Operations and Emergency Response (HAZWOPER) OSHA 29 CFR 1910.120(e)  
Certified in DOT Haz-Mat Transportation, 49 CFR 172, 704 (1-4)  
Certified Fire and Explosion Investigator (CFEI), 2010

#### **WORK HISTORY**

Founder & Senior Project Engineer, *AEI Corporation*, 2021 to Present  
President, *AEI Corporation*, 2005 to 2021  
Principal Engineer, *Western Engineering & Research Corporation*, 1997 to 2005  
Principal, *Freeman Engineering, Inc.*, 1986 to 1997  
Principal Engineer, *Fay Engineering Corporation*, 1976 to 1986  
Chief Engineer, *Solar Energy Research Corporation*, 1976  
Engineer, *Merrick and Company*, 1975 to 1976  
Vice-President, *Solar Energy Research Corporation*, 1973 to 1975  
Graduate student and research assistant, *Denver Research Institute*, 1971 to 1973  
Combat Engineer, United States Army, 1970 to 1971

#### **GAS AND COMBUSTION EQUIPMENT**

Mr. Freeman is an expert in gas appliances (furnaces, water heaters, grills, and boilers). He is an expert on gas control valves and regulators for both propane and natural gas as well as propane cylinders, tanks, and valves. Mr. Freeman has conducted over 250 investigations of carbon monoxide poisonings related to gas and combustion equipment. He has investigated over 1,000 explosions and fires. Mr. Freeman is a member of 32 Underwriters Laboratories Technical Panels for standards dealing with chimney and venting, furnaces and heating equipment, and solid fuel appliances.

#### **AWARDS AND ACCOMPLISHMENTS**

Invited speaker on gas explosions and carbon monoxide at numerous seminars.  
Mr. Freeman was co-inventor of US Patent No. 4,003,365 "Structure for Collecting Solar Energy"

#### **PUBLICATIONS**

List available on website, [www.AEIengineers.com](http://www.AEIengineers.com)

#### **AFFILIATIONS**

*National Fire Protection Association (NFPA)*  
*American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)*  
*American Society of Mechanical Engineers (ASME)*  
*International Association of Arson Investigators (IAAI), Colorado and International Sections*  
*National Propane Gas Association (NPGA) Technology, Standards & Safety Committee Member*  
*Member of 32 Standards Technical Panels, Underwriters Laboratories, Chimney and Venting, Furnaces, Solid Fuel Appliances*  
*Member of the National Association of Fire Investigators (NAFI)*