

**MICHAEL G. PINION, P.E., CFEI**

### **EDUCATION**

Master of Science in Systems Engineering 1990 - Virginia Tech  
Bachelor of Science Electrical Engineering 1977 - Virginia Tech

### **ADDITIONAL TRAINING**

Root Cause Investigations (Failure Prevention Inc.); Electric Power Research Institute-Equipment Qualification; IEEE Planning, Design, Protection of Industrial Power Systems; VEPCO Supervisory Training, Pressurized Water Reactor Systems; Eastern Kentucky University's National Advanced Fire, Arson, & Explosion Investigation Science & Technology Program 2004

### **CERTIFICATIONS**

Professional Engineer - Commonwealth of Virginia #22808  
Professional Engineer – State of Maryland #24545  
Professional Engineer – State of North Carolina  
Professional Engineer – State of Pennsylvania  
Professional Engineer – State of West Virginia  
NAFI Certified Fire & Explosion Investigator  
NAFI Certified Fire Investigator Instructor

### **PROFESSIONAL AFFILIATION**

Institute of Electrical & Electronic Engineers (IEEE)  
Electronic Devices Society (IEEE)  
Dielectric & Electrical Insulation Society (IEEE)  
National Association Protection Association (NFPA)  
National Association of Fire Investigators (NAFI)

### **CAREER HISTORY**

**Consultant:** Engineering consultant and expert witness to insurance companies, attorneys and self-insured corporations.

**J. Sargeant Reynolds Community College** - Engineering & Applied Science - Richmond, Virginia - Adjunct faculty member: As a part time faculty member, provide instructions in the Electronic Engineering Technology Associate Degree program.

**Virginia Electric and Power Company** - Innsbrook Technical Center - Glen Allen, Virginia - Supervisor of Engineering – Design - Responsibilities included managing a staff of electrical, mechanical, and chemical engineers in developing modifications to the company's pressurized water reactor plants.

**Nuclear Engineering Department** - Senior Staff Engineer: As Virginia Power's human factors engineer and lead electrical equipment qualification engineer, responsibilities included interpreting and applying industry standards and federal regulations. Applying the standards required preparation of calculations, technical reports, and design modifications. In addition, I directed other engineers in various aspects of nuclear power station design.

**Design Control Engineer** - Responsibilities included coordinating modifications developed by consultants and the corporate and station engineering staff. Coordinating the modifications involved providing the lead technical review. This review ensured that modifications complied with appropriate regulations, standards, and sound engineering principles.

**Raytheon Service Company** - Virginia Beach, Virginia - Engineer - Design and Development: Responsibilities included designing, managing the installation team, and testing electrical and electronic systems for U.S. Navy ship and shore facilities.

**Department of Defense** - Code 272, Internal Communications and Fire Control - Norfolk Naval Shipyard - Portsmouth, Virginia - Electrical Engineer: Responsibilities included designing internal communication and weapon systems for U.S. Navy surface ships. The design included the complete electrical/electronic system, and the operator interface to the system.

## **PUBLICATIONS**

WCAP-14764, "Aging Management Evaluations for Cables, Connectors, and Buswork", Co-expert panel member in the development of a Westinghouse Owners Group document, published in 1998.

## **ADDITIONAL INFORMATION**

While providing engineering duties for more than 25 years, Mr. Pinion has developed many reports, designs, equipment tests and installations on a variety of equipment. The work covered various topics including: equipment failures, aging mechanisms, materials of equipment construction, manufacturer's qualification tests, installation methods, maintenance practices, environmental service conditions, equipment and system designs and equipment interfaces. The types of equipment and subjects included:

- Accelerometers / Vibration Monitors
- Air Conditioner Compressor Motors
- Battery
- Battery Chargers
- Boiler Fuel Pumps
- Cables

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- Electric Tape Insulation
- Electric Water Heaters
- Electrical Installation Procedures
- Fan Motors
- Fire Suppression Equipment
- Fluorescent Lighting
- Level Transmitters
- Lighting Distribution Panels
- Lightning Protection / Strikes
- Motor Control Centers
- Motors
- National Electric Code Compliance
- HV Neon Sign Lighting and Connectors
- Parking Lot Lighting Survey
- Personal Computers
- Power Meter Booting Procedures
- Power Plant Boiler Level Systems
- Power Plant Operator's Communications
- Power Transformer Failures
- Pressure Transmitters
- Radio Transmitter
- Refrigerator Compressor Motors Relays
- Resistance Temperature Detectors
- Solenoid Operated Valves
- Submersible Well Pump Motors
- Surge Protection
- Switchboard Panels
- Switches
- Switchgear
- Telephone Systems
- Television Fire
- Terminal Blocks / Terminal Boards
- Thermocouples
- Tractor Electrical Wiring Failures
- Transformers
- Underwriters Laboratories Standards Compliance
- Uninterruptible Power Supplies (UPS)
- Wire Staple Failures