

George T. Cole, CEM, CESP, CESW

A seasoned electrical/electronic technician with nearly 30 years of hands-on experience specializing in maintenance of nuclear power generation equipment and electric transmission and distribution systems with an emphasis on electrical safety of employees.



EXPERIENCE

1983-Present **Arizona Public Service Company (APS)/Palo Verde Nuclear Generating Station (PVNGS)**

- **2008-Present: Palo Verde Nuclear Generating Station Electrical Maintenance Services**

Works as a Journeyman power plant electrician responsible for acceptance testing and maintenance of the electric generation equipment and distribution systems at the largest nuclear power generating station in the U.S.

Experienced in various electrical equipment associated with electric generation plants such as transformers, switchgear, motor control centers, inverters, UPS system, APU generators, batteries and battery chargers, large poly phase motors, grounding and bonding, equipotential zone (EPZ) grounding, temporary power installations, breakers and other types of overcurrent protection devices, enclosed spaces, protective relaying, etc. energized at low voltage (<600 V), medium voltage ($\leq 15\text{kV}$) and/or extra high voltage (525 kV).

However, he was promoted to oversee their electrical safety program to ensure all applicable OSHA, NFPA 70E, NESC and NEC safety standards are met and industry best practices are implemented at his plant through written procedures. He is now regarded as a subject matter expert in the realm of electrical safety, not only at Palo Verde but throughout the nuclear power industry in the US.

He conducts audits of electrical safety procedures and programs of other nuclear power generating stations and assists in audits of APS fossil generating plants, investigates electrical accidents and events occurring at his plant.

Provides electrical safety training for both qualified and unqualified workers.

- **1997-2008** **APS Field Services Communications**

As a technician he was responsible for installation and maintenance of high-tech communications equipment to support APS electric power generation, transmission, distribution, and business office needs.

Experienced in microwave and wireless radio systems, Sonet transport equipment, fiber optics, protective relaying, AC and DC power systems, Auxiliary Power Units, Uninterruptable Power Supplies, AC to DC rectifiers, DC to AC inverters, DC to DC converters, alarm and control telemetry, SCADA, digital and analog multiplexors, and Telephone PBXs

Skilled in tower construction, climbing and emergency rescue, etc.

Developed procedures and lesson plans and implemented training of telecommunications co-workers working near high voltage electrical equipment located inside transmission and distribution substations or on power line towers and poles. Also provided training in tower climbing safety and rescue techniques.

- **1994-1997** ***APS Substation Maintenance and Construction***

Responsible for the construction, maintenance and testing of electric equipment located inside transmission (525, 345 and 230 kV) and distribution (69 and 12.5 kV) substations commonly used in electric utility networks.

Experienced with large power transformers, breakers, manual and motor operated switches/disconnects, battery banks, reactors, capacitor banks, grounding grids, control circuits, SCADA, etc. located inside of or associated with electric substations.

Used various test equipment, operated bucket line trucks, elevating work platforms, forklifts and other pieces of heavy equipment.

- **1992-1994** ***PVNGS Electrical Facility Maintenance***

Responsible for maintenance, light construction and remodeling of the non-power plant related buildings, structures, and facilities at the Palo Verde Nuclear Generating Station. Primary duties consisted of lighting circuits, temporary electrical power needs, testing of UPS and their associated battery banks, auxiliary power units (APU), installation of new feeders and branch circuits and HVAC support.

CERTIFICATIONS AND ACCOMPLISHMENTS

- OSHA Special Government Employee (SGE)
- NFPA 70E Certified Electrical Safety Compliance Professional (CESCP)
- NFPA 70E Certified Electrical Safety Worker (CESW)
- Certified Industrial Electrical Safety Inspector (CIESI)
- Regarded as the Subject Matter Expert for all electrical safety matters at the Palo Verde Nuclear Generating Station, Phoenix, AZ
- Member of the NFPA Certification Advisory Group (CAG) for CESCP and CESW
- Member of the nuclear power generation Industry Working Group (IWG) for Electrical Safety
- Member of the PVNGS Site Safety Committee
- Instructor at Electrical Safety workshops during ADOSH (AZ OSHA) and VPPPA Safety Conferences