FIRE PROTECTION ENGINEER (CAO) C – 510077

Organization: Facilities

Department: Architecture & Engineering

Location: Chattanooga, TN or Knoxville, TN

Salary: Competitive

**Job Summary**

Serves as the expert level fire protection-engineering consultant to all TVA organizations. Has the responsibility for providing corporate fire protection engineering services in both programmatic and technical matters. Works with corporate and line management in the development and/or interpretation of fire protection policy and standards as applied to the protection of life, property loss prevention, and the interruption of business operations. Works closely with architects and engineers by providing fire protection engineering consultation for the design of new commercial and power generating facilities and for fire protection improvements to existing facilities. Conducts risk assessments to evaluate the potential for loss of life and property damage from the threat of fire and other similar perils. Provides project management and engineering services for multimillion-fire protection upgrade projects. Responsible as fire protection expert in matters such as life safety, property protection and industrial loss prevention. Has routine contact with senior level managers at both the corporate offices and at the power plants.

**Duties in more detail include:**

1. Performs the most difficult fire protection audits of TVA fossil and nuclear plants, sites and facilities. Work consists of evaluating systems, programs and facilities for compliance with NRC and other regulatory requirements and adequacy of designs and administrative controls, etc.

2. Performs complex fire risk assessments using probability based and recognized industry based methodologies to assist management in developing operational and planning business decisions.

3. Provides testing and detailed evaluation of system performance for fire protection systems and life safety features and associated equipment at commercial, power generating, power distribution facilities.

4. Reviews design drawings and specifications to ensure an optimal, cost effective level of fire protection is provided.

5. Uses extensive experience and sound engineering judgment to formulate innovative and cost effective solutions to difficult fire protection problems, including system designs.

6. Performs project management and engineering functions for multimillion fire protection improvement projects to ensure that contractor designed and installed systems meet all contractual technical specifications, are tested and meet all acceptable performance criteria, and systems are completed on schedule and within budget.

7. Provides training for plant personnel in operation and maintenance of new fire protection systems.

8. Investigates large loss and other unusual fire loss incidents for determination of causal factors that may prevent future incidents.

9. Available as a technical service resource providing expeditious technical assistance in areas of life safety, fire protection engineering, loss prevention, code compliance and other related subjects to all TVA engineers and managers upon request.
**Supervision Received**

Supervision and guidance are provided by the department manager and are generally limited to overall objectives, general guidelines, and work priorities. Incumbent plans and executes the work with minimal supervision.

**Skills and Proficiencies (May be job or organization specific)**

Comprehensive knowledge and in-depth ability to use fire protection engineering theory, principles, practices and state-of-the-art technology. Expert working knowledge of both fire suppression and fire detection systems and the necessary mechanical and electrical interfaces between them and other building systems. Proficient in fluid hydraulic theory to evaluate and design water based fire suppression and water supply systems. Strong working knowledge of the Life Safety Code. Expert working knowledge of building codes and fire codes and the ability to apply to both commercial and industrial facilities. Comprehensive working knowledge of fire investigative techniques and related forensic sciences. Extensive hands-on experience on all types of fire protection systems to perform operational testing, trouble shooting and employee training. Expert level computer skills in computer fire and hydraulic modeling.

**Minimum Qualifications (Consistent with Classification Standard)**

**Education and Experience/Certificates, Licenses, and Registration Requirements/Other Requirements**

A B.S. Degree in fire protection engineering or a related field of engineering from an accredited university. Ten or more years of progressive experience in fire protection engineering. Must be eligible for acceptance as a Member Grade in the Society of Fire Protection Engineers. Must be multi-task oriented, have excellent written and oral communication skills, and demonstrate excellent analytical, creative problem solving, customer focus, and leadership skills. Professional engineering registration (PE) by exam in fire protection in the State of Tennessee is required.