

## City of Fort Worth, Texas Job Description

<b>Classification Title</b>	Senior Turbine Operator		
<b>Job Code:</b>	TC5781	<b>Job Family:</b>	Technical / Para-professional
<b>Pay Grade</b>	512	<b>Date Reviewed:</b>	12/30/2019
<b>FLSA Status</b>	Nonexempt	<b>Date Revised:</b>	

### GENERAL SUMMARY

Under general supervision, supervises staff and ensures the safe, efficient and continuous operation of a combined heat and power plant which includes two turbine/generator sets, a heat recovery steam generator (HRSG), two steam turbine/blower sets, and various auxiliary equipment; operates/monitors the equipment and makes minor adjustments as necessary; maintains records and record changes in operation that can lead to possible problems; troubleshoots and resolves equipment issues; on-call 24/7 to address maintenance concerns.

### ESSENTIAL DUTIES & RESPONSIBILITIES

*The intent of this job description is to provide a representative summary of the major duties and responsibilities performed by incumbents of this job. Incumbents may be requested to perform job-related tasks other than those specifically presented in this description.*

1. Supervises staff, which includes prioritizing and assigning work; conducting performance evaluations; ensuring staff is trained; ensuring employees follow policies and procedures; maintaining a healthy and safe working environment; and, making hiring, termination, and disciplinary decisions or recommendations.
2. Conducts preventative maintenance on equipment and develops maintenance plans to ensure proper operation of equipment. Reviews and records testing and inspection results in database.
3. Verifies the equipment is running correctly. Reviews problems and provides solutions. Resolves operational issues. Must be on-call 24/7 to address maintenance concerns.
4. Operates and troubleshoots various electrical and control problems which include high pressure steam systems, auxiliary steam systems, combustion air systems, plant and control air systems, fuel systems, fabric filter baghouse, cooling water systems, feed water systems, and other auxiliary systems.
5. Identifies equipment problems, resolves abnormal conditions and properly documents using logs, records, and work request system.
6. Serves as liaison for the City and works with contractors, site personnel, conducts tours, maintains inventory and completes purchase orders. Contacts contractors to obtain quotes for necessary equipment and services. Oversees contractors and related work as necessary.

7. Monitors facility electrical loads, fuel demands and turbine operation parameters; balances electrical demands; ensures everything is running efficiently and safely.
8. Creates reports, completes daily logging of reports containing gas uses, provides monthly energy report, and ad hoc reports as needed. Analyzes data to find trends and identifies, diagnoses and corrects potential problems.
9. Reads and interprets blue prints, technical specifications and operating manuals.
10. Ensures electrical and mechanical equipment are de-energized and made safe for working conditions as required. Ensures appropriate permits are filed to complete required work.
11. Ensures and performs area housekeeping as required.
12. Ensures work area is environmentally safe and free of physical hazards. Addresses problems immediately.
13. Participates in area meetings, training and other plant meetings when applicable.
14. Performs other related duties as required.
15. Adheres to assigned work schedule as outlined in the Department and City attendance policies and procedures; ensures all behaviors comply with the City's Personnel Rules and Regulations.

## **KNOWLEDGE, SKILLS & ABILITIES**

- **Knowledge of:**

- Computerized maintenance management systems.
- Equipment clearance lockout/tagout (LOTO) procedure, as well as, Job Safety Analysis/Work Authorization/Confined Space/Hot Work Permits.
- Heat Recovery Steam Generators (HRSG), steam turbine, gas turbines, plant auxiliary operations, equipment and systems during normal and emergency operation.
- Microsoft Excel and Word applications.
- Power plant operations, systems, and equipment.
- Reading and interpreting blueprints, schematic diagrams, Piping and Instrumentation Diagrams (P&IDs), procedures and technical manuals.
- Water analysis of HRSG water and necessary adjustments to chemical feed to maintain water quality to within desired specifications.

- **Skill in:**

- Use addition, subtraction, multiplication and division to perform flow, pressure and meter calculations.
- Reading and interpreting blueprints, schematic diagrams, P&IDs, procedures and technical manuals.
- Data entry.
- Discerning and responding to verbal and auditory signals from control panel (i.e., Distributed Control System (DCS), Continuous Emissions Monitors (CEMs), and Programmable Logic Controller (PLC) systems).
- Hand and power tools and equipment.

- Making observations.
  - Operating HRSG, steam turbine, gas turbines, plant auxiliary equipment and systems during normal and emergency operation.
  - Prioritizing work activities.
  - Troubleshooting to solve problems.
- **Ability to:**
    - Analyze and interpret data to make sound recommendation on plant components.
    - Discern and respond to verbal and auditory signals from control panel (DCS, CEMs, PLC systems).
    - Perform water analysis of HRSG water and make necessary adjustments to chemical feed to maintain water quality to within desired specifications.
    - Properly operates HRSG, steam turbine, gas turbines, plant auxiliary equipment and systems during normal and emergency operation.
    - Read and interpret blueprints, schematic diagrams, P&IDs, procedures and technical manuals.
    - Troubleshoot power plant operations, systems, and equipment to solve problems.
    - Understand and execute the equipment clearance (LOTO) procedure, as well as, Job Safety Analysis/Work Authorization/Confined Space/Hot Work Permits.
    - Use addition, subtraction, multiplication and division to perform flow, pressure and meter calculations.
    - Use hand and power tools and equipment.
    - Write reports, perform data entry, and analyze data to make current assessments, forecasts, and sound recommendations.

### **MINIMUM JOB REQUIREMENTS**

Associate's degree in Mechanical Engineering, Industrial Engineering, or Electrical Engineering or a related field and five (5) years of experience working with Heat Recovery Steam Generators (HRSG), steam turbine, gas turbines, plant auxiliary operations, or related equipment and systems.

### **OTHER REQUIREMENTS**

Valid Texas Class C driver's license.

### **WORKING CONDITIONS**

*The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

Depending on assignment, positions in this class typically require touching, talking, hearing, seeing, grasping, standing, stooping, kneeling, crouching, reaching, walking, repetitive motions, climbing, balancing, pushing, pulling and lifting; depending on assignment. Incumbents may be exposed to moving mechanical parts, odors, dusts, poor ventilation, chemicals, oils, extreme temperatures, inadequate lighting, intense noises, gases, vibrations, chemicals, oils and workspace restrictions.

## **PHYSICAL DEMANDS**

*The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

Heavy Work – Depending on assignment, positions in this class typically exerting up to 100 pounds of force occasionally, up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly having to move objects.