

POWER GENERATION OPERATOR/MECHANIC

DEFINITION

Under general supervision, operates, maintains, monitors, services and repairs power generation (PG) equipment, including associated and auxiliary equipment generating electrical power for use in water/wastewater treatment operations.

SUPERVISION RECEIVED/EXERCISED

Receives supervision from a Supervisor. Exercises no supervision.

DISTINGUISHING CHARACTERISTICS

This is a journey level class.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

(May include, but are not limited to, the following:)

Operates, maintains, monitors, services and repairs dual-fuel/clean-burn engines or single/dual-fueled gas turbine power generating equipment, including but not limited to, gas turbine engines, dual staged steam turbines, high pressure boilers, waste gas flares, reciprocating diesel and gas emergency generators, gear reduction, oil systems, automatic valves, filters, fuel systems, pumps, air compressors, gas compressors, cooling tower, water softening systems, heat exchangers, generators, diesel fuel systems, etc.

Inspects, regulates, and adjusts equipment; operates manual controls to ensure power output is maintained at predetermined levels, and is distributed properly.

Monitors gauges, meters and other measuring and recording devices.

Keeps records and logs of power plant operations, fuel used, maintenance performed, and equipment breakdowns or other out-of-the ordinary occurrences.

Shuts down and starts up equipment as required for repairs or maintenance.

Repairs and overhauls PG engines, generators, pumps, and all associated equipment consistent with preventive maintenance programs or when breakdowns occur.

Utilizes plant computer system for monitoring and controlling PG activities, including records and reports generation.

Services, cleans and lubricates equipment.

Uses a variety of City-supplied hand and power tools.

Reviews supply inventory, and replenishes as required.

Ensures compliance and adherence to safety procedures; recognizes potential on-the-job hazards, and uses safe operating procedures and safety equipment in performing routine and unusual procedures to ensure the health and safety of staff.

Performs other related duties as assigned.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Knowledge of:

The operation, maintenance, and servicing of large dual-fuel/clean-burn or single/dual-fueled PG engines, generators, compressors and all associated or auxiliary equipment.

Safety rules, codes, procedures and precautions relating to large stationary engines and auxiliary equipment, including explosive gases, flammable or toxic liquids, moving machinery parts, and pressure components.

The principles, procedures and practices of manual and automatic switching operations of generating equipment.

The methods, tools and equipment used in repairing and overhauling all manner of PG equipment.

The layout, equipment, instrumentation and functions of an electrical generation, transmission and distribution system.

Skill/Ability to:

Operate and maintain single/dual fueled methane, diesel and/or natural gas engines, auxiliary equipment, and make necessary and timely adjustments to meet various operational needs.

Effectively and properly use PG tools and equipment.

Apply physical strength and agility to work under arduous conditions.

Safely operate a motor vehicle.

Learn new procedures, apply them, and readily adapt to changing technology.

Recognize abnormal operating functioning and take appropriate action.

Use personal/office computers proficiently.

Follow oral and written instructions.

Establish and maintain accurate records; prepare clear and concise reports; communicate effectively orally and in writing.

Establish and maintain effective working relationships at all organizational levels, including the public.

MINIMUM QUALIFICATIONS

Education:

Possession of a High School Diploma or equivalent GED completion.

Experience:

Three (3) years of increasingly responsible experience in operating, maintaining, monitoring, servicing, and repairing mechanical and electrical equipment similar to that used in engine and/or gas turbine driven electrical PG setting.

Special Requirements:

Possession of a valid California Class C Driver License is required at the time of application and continued maintenance throughout the entire term of employment in this classification.

For assignment to a water systems environment, incumbents must obtain within twelve (12) months of assignment and maintain throughout the entire term of assignment, a valid Water Distribution Operator Certificate, Grade D2, issued by the Department of Water Resources, State Water Resources Control Board.

PHYSICAL DEMANDS

The physical demands described here are representative of those that are necessary to safely, effectively, and efficiently perform the essential functions of this job with or without reasonable accommodation.

This classification's physical demands involve medium work exerting up to 50 pounds of force occasionally, and/or up to 30 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects. Additionally, the following physical demands may be required: balancing, climbing, crouching, feeling, manual dexterity, grasping, handling, hearing, kneeling, lifting, mental acuity, pulling, pushing, repetitive motion, speaking, standing, stooping, talking, visual acuity, walking.

APPROVED: Signature on File
Director of Personnel Services

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