

POWER PLANT OPERATOR/TECHNICIAN I
POWER PLANT OPERATOR/TECHNICIAN II

DEFINITION

To perform technical work related to operating, monitoring, and maintaining electric power plant generation systems and related water cooling and zero liquid discharge processing.

DISTINGUISHING CHARACTERISTICS

Power Plant Operator I - This is the entry level class in the Power Plant Operator/Technician series. Positions in this class typically have little or no directly related work experience and work under immediate supervision while learning job tasks. The Power Plant Operator/Technician I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under immediate supervision while learning job tasks, progressing to general supervision as procedures and processes of assigned area of responsibility are learned.

Power Plant Operator II - This is the journey level class in the Power Plant Operator/Technician series and is distinguished from the I level by the assignment of the full range of duties. Employees at this level receive only occasional instruction or assistance as new, unusual or unique situations arise and are fully aware of the operating procedures and policies within the work unit. Positions in this class are flexibly staffed and are normally filled by advancement from the I level.

This class is distinguished from the Senior Power Plant Operator/Technician in that the latter performs advanced journey level work and provides technical and functional supervision to assigned staff.

SUPERVISION RECEIVED AND EXERCISED

Power Plant Operator/Technician I

Receives immediate supervision from the Power Plant Operations & Maintenance Supervisor.

Receives technical and functional supervision from a Senior Power Plant Operator/Technician; may receive technical supervision from a Power Plant Operator II as appropriate.

Power Plant Operator II

Receives general supervision from the Power Plant Operations & Maintenance Supervisor.

Receives technical and functional supervision from a Senior Power Plant Operator/Technician.

EXAMPLES OF ESSENTIAL DUTIES - Duties may include, but are not limited to, the following:

Operate, monitor, and maintain electric power plant generation systems and related water cooling and zero liquid discharge processing; observe plant operating status; perform regular visual checks of mechanical and electric processes and related equipment; check gages and equipment to ensure proper operation.

Monitor, test and adjust water chemistry and related pumps to maintain efficient operation of boilers, steam turbines, the cooling tower, and heat recovery steam generators; ensure protection of equipment from damage due to water chemistry problems; and maintain consistency of water flow usage to chemical feed.

Perform chemical testing related to quality control of steam, cooling and condensation systems; monitor acidity levels and temperature for efficient processing and hardness related to the reverse osmosis processing system.

Perform start up of processing systems as required to avoid plant down-time, lost revenue, repair costs, and to promote efficient plant operation.

Perform routine preventive maintenance when plant conditions allow; assist maintenance staff in shutdown related maintenance and repair activities.

Observe and monitor air quality emissions, especially as related to adverse weather or operating conditions that may result in damage to equipment; report problems and/or prepare work orders to correct problems.

Lubricate and label a variety of equipment and supplies; respond to alarms; and assist with plant housekeeping to ensure a safe work environment.

Prepare documentation and reports and maintain logs and records related to work performed, supplies used, plant operations issues and regulatory compliance.

Make recommendations regarding operating procedures and plant operating efficiency.

Build and maintain positive working relationships with co-workers, other City employees and the public using principles of good customer service.

Perform related duties as assigned.

MINIMUM QUALIFICATIONS

Power Plant Operator/Technician I

Knowledge of:

Basic principles and techniques used in the operation of an electric combined cycle power plant.

Equipment, tools and materials used in maintaining and repairing combined cycle power plant systems, pumps, motors, and related equipment.

Basic understanding of chemistry, physics, electricity, and mathematics.

Safe work practices.

Principles and procedures of record keeping.

Ability to:

Learn to operate and monitor electric power plant generating systems.

On a continuous basis, know and understand operations, and observe safety rules; intermittently analyze problem equipment; identify and locate equipment; interpret work orders; remember equipment location; and explain jobs to others.

Intermittently, sit while studying or preparing reports; reach, bend, squat, climb, kneel and twist when repairing or installing equipment; perform simple and power grasping, pushing, pulling, and fine manipulation; and lift or carry weight of 50 pounds or less.

Learn standard operating procedures related to operating and monitoring electric power plant generation systems.

Learn to handle inert and explosive gases such as H₂, N₂, O₂, acetylene, CO₂ and to safely handle and transfer bulk chemicals.

Learn to identify a variety of operating system malfunctions and recommend appropriate corrective action.

Read and interpret gages and other monitoring devices.

Prepare and maintain records of activities, supplies used, and regulatory compliance.

Work assigned shift schedules; be available for call-back and on-call assignment.

Work unusual and prolonged work schedules during emergencies, seasonally-caused circumstances in varying weather and temperature conditions.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

Experience and Training

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

One year of experience performing duties related to operating and monitoring a process system in an industrial plant environment such as an electric utility, chemical plant, or oil refinery.

AND

Training:

Equivalent to completion of the twelfth grade.

License and Certificate

Possession of, or ability to obtain, a valid California driver's license.

Power Plant Operator/Technician II

In addition to the qualifications for the Power Plant Operator/Technician I:

Knowledge of:

Principles and techniques used in operating and maintaining the equipment and systems of an electric combined cycle power plant.

Operational practices related to a zero liquid discharge facility.

Pertinent local, State and Federal rules, regulations and laws especially as related to the operation of an electric power plant.

Methods, procedures, materials and tools used in electrical installation and maintenance.

Safe work practices.

Department policies and procedures and standard operating procedures related to operation and maintenance of an electric combined cycle power plant.

Ability to:

Independently operate and monitor electric power plant generating systems.

Experience and Training

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

Two years of responsible experience performing duties similar to a Power Plant Operator/Technician I with the City of Roseville.

AND

Training:

Equivalent to completion of the twelfth grade.

License and Certificate

Possession of, or ability to obtain, a valid California driver's license.

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09-10-05 Power Plant Operator/Technician I/II