



Advanced Water Treatment Plant Operator

Class Code:
717

ALAMEDA COUNTY WATER DISTRICT
Revision Date: May, 2013

DEFINITION

Under supervision of the Treatment and Distribution Supervisor, serves as shift leader for Water Treatment Plant and Solids Handling Operators; operates, inspects and maintains District water treatment plants and related facilities to supply, treat, store and distribute water for a large urban potable water distribution system; operates the more complex plant systems, including the CO₂ system, the power facility, the ozone system, and the pre-filter and filter press operation; oversees and follows security procedures; analyzes complex and unusual operating situations and matters and provides data analyses, reports, and recommendations; and performs other related work as required.

Advanced Water Treatment Plant Operators function as Shift Operators as defined by the State and accept the responsibilities inherent in a treatment plant operator who is also operating a distribution system as stipulated in California Code of Regulations Title 22, Division 4 CCR, Chapter 13, Articles 1,2,3,4,5, Chapter 15, Article 2.

DISTINGUISHING CHARACTERISTICS

Advanced Water Treatment Plant Operator is the advanced-journey level classification in the Water Treatment Plant Operator series. Under general supervision within a framework of established policies and procedures, incumbents are fully qualified Water Treatment Plant Operators who, based on their District experience and Grade T4 Water Treatment Plant Operator certification, are thoroughly competent to function as the Shift Operator, effectively operate all systems in the District's surface water plants and blending facility, respond effectively to unscheduled shutdowns, serve as in-house hands-on expert on plant operations and effectively transfer complex knowledge and capability to less experienced operators.

This class is distinguished from the Water Treatment Plant Operator classification which has responsibility for the efficient operation and general maintenance of a water treatment plant and distribution system on an assigned shift. These classifications are flexibly staffed. The Water Treatment Plant Operator normally advances to this advanced-journey level classification after three (3) years experience at the journey-level, obtaining a Grade T4 Water Treatment Plant Operator Certificate, receiving a performance rating of "meets requirements" overall on the most recent evaluation and supervisory confirmation of proficiency in the job requirements of the advanced-journey level classification.

TYPICAL DUTIES

TYPICAL EXAMPLES OF DUTIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- Assists in the scheduling of production staff to assure adequate coverage of shifts.
- Provides lead direction, training and work review for plant operations staff.
- Assists in the oversight of the administrative aspects of operating a treatment plant, including completion of monthly reports, time sheets, inventory records and maintenance requests.

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- Coordinates review and update of operations procedure manuals.
- Operates all equipment needed to regulate water flow through the hydropower and water treatment plant processes, including equipment related to conventional treatment (with ozone disinfection) and management of residuals generated from such processes in order to meet production requirements and drinking water quality standards.
- Monitors and controls the water supply, transmission and storage systems through a plant supervisory control and data acquisition (SCADA) system, and analyzes and acts accordingly to control flow through various transmission and distribution facilities or to take other actions as required.
- Computes chemical dosages and adjusts chemical feeders.
- Monitors operation of membrane treatment facilities, shuts down such facilities as necessary, and notifies Treatment Facilities Operators of membrane facility alarms and actions taken.
- Prepares and maintains detailed and accurate logs, records and reports on a variety of functions including; plant operations, test results, maintenance work performed, unusual operating conditions and the results of periodic inspections conducted; uses a computer to maintain data base files and generate reports.
- Performs a variety of laboratory tests to determine plant process performance and compliance with water quality regulations; maintains laboratory equipment in clean condition.
- Takes regular inventories of chemicals and other supplies used during the operation of water facilities; orders operating supplies and chemicals as needed; and assists with the safe unloading and storage of chemicals.
- Works with hazardous chemicals related to water treatment; receives training and responds to hazardous chemical spill events at District facilities
- Makes equipment adjustments, lubrications and minor repairs and participates in major plant repairs.
- Receives calls from customers, dispatches personnel if needed; maintains telephone and radio communications with field employees, security forces and others, including lock out/tag out programs, confined space program and emergency operations plan in a twenty-four hours/day, seven days/week operation.
- Operates District communications center during off hours, on weekends, holidays and as needed.
- Learns and receives training on a variety of issues including: advanced operational and technological developments in the water industry and safety and environmental compliance requirements.

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- Maintains plant, operating equipment and facilities in a clean and orderly condition; performs routine housekeeping chores inside and outside the plant and conducts regular site safety inspections.
- With proper training, may perform the assigned responsibilities of a Solids Handling Operator on an as-needed basis.
- May conduct tours for individuals or groups, as requested.
- May operate a motor vehicle, fork lift or front-end loader incidentally in the performance of work.
- Performs other related work as required.

REQUIREMENTS

Any combination of education and experience that would likely provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the knowledge, skills, and abilities would be the equivalent of:

Education and Experience:

High school diploma or equivalent and three (3) years of experience as a Water Treatment Plant Operator with the District.

Knowledge, Skills and Abilities:

Working Knowledge of: the operation, maintenance and cleaning of water treatment plant and distribution system equipment and facilities; power facility and ozone system operations, including ancillary equipment prior to ozone generation; CO₂ system; shutdown procedures, including unplanned shutdowns; security procedures and responsibilities; processing of pre-filter press solids and filter press solids; procedures for providing and overseeing on-the-job training; water treatment principles, methods, and practices; safe work practices and pertinent safety rules, codes, and regulations; arithmetic; the methods and precautions related to storing and handling chlorine and other hazardous chemicals; mechanical, electrical, and hydraulic principles; identification, use and safe operation of standard hand and power tools and equipment; and standardized water quality tests.

Advanced Skill and Ability to: conduct planned and unplanned shutdowns; operate the more complicated plant systems, including the CO₂ system, the power facility, ozone system, and pre-filter and filter press operation; oversee and follow security procedures; provide advanced-journey level expertise to lower-level Operators and conduct on-the-job training on the more complex aspects of the work; analyze complex and unusual operating situations and matters and provide data analyses, reports, and recommendations; operate the water treatment plant and distribution system equipment, including automatic control devices; accurately read and record data from gauges and meters; read and interpret plant piping and distribution diagrams; perform standardized water quality tests and adjust plant equipment accordingly; make basic arithmetic calculations quickly and accurately; effectively use computers for data base management and to generate reports; establish and maintain effective working relationships; and perform essential duties of the job without causing harm to self or others.

Additional Requirements:

- Must possess a valid California driver's license and have a satisfactory driving record
- Must possess a Grade T4 Water Treatment Plant Operator Certificate

Working Conditions/Physical Requirements:

The essential duties of this classification require the ability to work outdoors under various climatic and geographic conditions; to work rotating assignments; to work weekends, holidays, and overtime as needed; to work with and around hazardous chemicals; to be clean shaven and able to wear respiratory protection equipment as required; to complete necessary Continuing Education (CEU) as required to obtain, maintain and renew requisite certification.

The essential duties of this classification require repetitive use of feet and hands to operate vehicles, equipment and tools; the ability to lift sacks of chemicals weighing up to 55 pounds; to speak to verbally exchange ideas and information; to hear to receive verbal detailed information and instruction; to see at arms length to twenty feet with a good field of vision and the ability to distinguish basic colors; to walk, stand and climb for sustained periods of time; and finger dexterity and hand strength to operate and grasp tools and equipment on a daily basis.

Revised: 05/13

Approved: 
Human Resources/Risk Manager