

WATER RESOURCES PLANT OPERATOR II

JOB DESCRIPTION

Classification Responsibilities: A Water Resources Plant Operator II is responsible for managing the complex daily operations and maintenance of City of Mesa's water reclamation or potable drinking water treatment plants (*depending on assignment*) with oversight by the Water Resources Plant Supervisor. Employees at this level receive occasional supervision, instruction, and assistance as new or unusual situations arise, and must be capable of independent, well-informed, technically correct decisions. Duties include: analyzing trends and data; monitoring equipment and processes through all available means to include gauges, meters, and Supervisory Control and Data Acquisition (SCADA) inputs; documenting and reviewing ongoing plant process operations and maintenance issues; optimizing day to day processes; economic utilization of materials and equipment; collecting and analyzing process samples using laboratory procedures; demonstrating thorough and complete documentation; and systematic reviewing of all process procedures and anomalies. Computer data entry and organization of information is essential. Assist in the formulation and implementation of procedural objectives and programs. Operators in this class frequently participate in training activities both as a student and a teacher. An employee in this class is required to use appropriate safety equipment, and to follow strict safety procedures in performing assignments. This class performs related duties as required.

Distinguishing Features: A Water Resources Plant Operator II works rotating shifts (*by assignment*) and may be required to work at different plant locations. This position assumes responsibility of operations while on assigned shift, weekends, or holidays. Employees are subject to stand-by, or emergency call-out during off-duty hours. This class works under the supervision of a Water Resources Plant Supervisor. This position provides leadership, mentorship, and training to other operational staff, and may serve in a lead capacity for operations in the absence of the Supervisor. Responsible for prioritizing activities between the different treatment facilities and systems in order to maintain proper facility operation. Employees are exposed to job hazards including: toxic chemicals, methane gas, chlorine gas, ozone, hydrogen sulfide, raw sewage, sludge, and adverse weather conditions. This class is FLSA nonexempt.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required.

Potable Water Treatment Plant Assignment: Any combination of training, education, or experience equivalent to graduation from high school or GED. Three years of experience in a water treatment plant, with at least 12 months as a Water Treatment Plant Operator. Graduation from an accredited college or university with an Associate's Degree in a related field can be substituted for one year of experience; **OR** one year of full-time experience with the City of Mesa as a Water Resources Plant Operator I, **OR** a minimum of six months of full-time experience with the City of Mesa as a Water

Resources Plant Operator I **and** six months of full-time experience with the City of Mesa as a Water Treatment Plant Operator/Intern may also be considered qualifying.

Water Reclamation Plant Assignment: Any combination of training, education, or experience equivalent graduation from high school or GED. Three years of experience in a wastewater treatment plant, with at least 12 months as a Wastewater Treatment Plant Operator. Graduation from an accredited college or university with an Associate's Degree in a related field can be substituted for one year of experience; ***OR*** one year of full-time experience with the City of Mesa as a Water Resources Plant Operator I, ***OR*** a minimum of six months of full-time experience with the City of Mesa as a Water Resources Plant Operator I **and** six months of full-time experience with the City of Mesa as a Water Reclamation Plant Operator/Intern may also be considered qualifying.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire date. Must meet the physical standards and requirements for the wearing of a Self-Contained Breathing Apparatus (SCBA) respiratory protection equipment. Must meet the qualifications to wear a tight-fitting respirator by passing a medical evaluation in accordance with Code of Federal Regulations (CFR) 1910-134 by hire or promotion date and must maintain certification. Must obtain a 40-hour HazWoper Certification as per the Occupational Safety and Health Administration (OSHA) and must attend an annual HazWoper refresher course to maintain certification.

Potable Water Treatment Plant Assignment: Must possess a Grade III (or higher) Water Treatment System Operator certification from the Arizona Department of Environmental Quality (ADEQ) or equivalent certification from another state through reciprocity with Arizona by application date. Certification through reciprocity must be obtained within three months of hire or promotion. Shall be responsible for acquiring a minimum of 30 Professional Development Hours (PDHs) every three years to maintain ADEQ Certification. Must meet the physical standards and requirements for the wearing of a SCBA respiratory protection equipment.

Water Reclamation Plant Assignment: Must possess a Grade III (or higher) Wastewater Treatment System Operator certification from the ADEQ or equivalent certification from another state through reciprocity with Arizona by application date. Certification through reciprocity must be obtained within three months of hire or promotion. Shall be responsible for acquiring a minimum of 30 PDHs every three years to maintain ADEQ Certification.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualifications. Completion of at least 15 semester hours of college coursework in Water Technology, Environmental or Chemical Engineering, Mechanical Maintenance/Repair, Manufacturing Equipment Maintenance/Repair, or any related curriculum is preferred.

ESSENTIAL FUNCTIONS

One position may not include all of the essential functions, knowledge, and abilities listed, nor do the listed examples include all the knowledge and abilities, which may be found in positions of this classification.

Communication: Communicates with other City employees in order to relay information on plant operation and maintenance. Maintains written shift logs and records on test results, flow rates, meter readings, water/effluent quality, and other operational parameters. Maintains logs and worksheets of plant equipment condition, and compiles equipment readings and test results into hourly, daily, and monthly reports. Coordinates water or effluent deliveries with other staff or external agencies. Responds to and informs supervisors and coworkers of present and potential problems and hazards.

Manual/Physical: Requires a standard Class D Arizona Driver's License to operate City-owned vehicle to deliver and collect supplies, parts, and other materials for various City facilities. Operates powered industrial trucks, which may include forklifts, backhoes, etc. This will require training and certification requirements per OSHA 29 CFR 1910.178(1). Uses common hand tools such as: hammers, saws, screwdrivers, valve keys, and lubrication equipment to repair, operate, or maintain equipment. Work around or uses potentially hazardous materials requiring the use of specialized equipment. Lifts and/or carries heavy equipment/objects (up to 100 pounds or more) for distances of 20 feet or more with the assistance of a handcart or power equipment (500 pounds to 1 ton) works in all weather conditions. Meets scheduling and attendance requirements.

Potable Water Treatment Plant Assignment: Monitors SCADA displays, gauges, and meters to ensure proper plant operation. Monitors the mixing, flocculation, settling, filtration, and sludge dewatering equipment operations. Checks chemical tank levels. Operates valves, gates, pumps, and remote-control devices. Adjusts the water flow and chemical feed rate and mixes chemical solutions. Operates pilot plant system to evaluate and improve water treatment plant effectiveness. Enters data into a computer workstation in order to provide daily summary of water flows, chemical and energy usage, and backwash and sludge dewatering information. Uses a variety of standard testing procedures to determine problems and any adjustments needed in the treatment process, and operates laboratory equipment to perform analyses. Distinguishes colors to determine the outcome of certain chemical analyses. Cleans work area, pumps, tanks, and lab equipment. Works with hazardous materials including toxic chemicals and chlorine gas using normal and/or specialized protective equipment, including SCBA. Moves objects such as chlorine containers and chemical drums (450-600 pounds) using hoist to mix and/or replace. Works with cleaning solutions, painting plant structures, and equipment using normal protective equipment. May perform yard work, sweep plant areas, and perform general housekeeping duties. Works in confined areas that may contain toxic gases or that are low in oxygen while performing maintenance on equipment.

Water Reclamation Plant Assignment: Conducts laboratory tests and equipment adjustments to effect necessary process changes reflected in laboratory tests. Monitors plant functions by reading gauges, graphs, meters, and control panels. Changes plant operations to adjust to processing needs, adjust pumps, flow valves, and feeder systems. Collects liquid, solid, and gas samples; and performs a variety of laboratory tests, documents results, and evaluates chemical tests. Performs maintenance, calibration, and repair of: plant equipment, pumps, valves, mixers, digesters, centrifuges, blowers, chlorinators,

chemical feeds, sludge equipment, ultraviolet equipment, and basic laboratory instruments and electronic monitoring devices, including lubrication of plant equipment. Unloads and stores chemicals and mix chemical solutions. Makes rounds of the plant and inspects buildings, grounds, pump stations, and equipment for conformance to safety standards, security requirements, and operating parameters to deliver material, and complete other job assignments. Operates power-driven machinery such as: drill press, grinder, sand blaster, backhoe, and chop saw to repair or maintain equipment, structures, or grounds. Cleans work area and/or equipment, pumps, motors, tanks, grinders, tools, bar screen, centrifuges, odor control equipment, and structures. Moves materials (example: chemicals, paints, cleaning fluids, equipment, etc.) from one place to another using hoists, dollies, carts, trucks, and pumps. Digs up ground using a pick, shovel, or spade to locate or install lines. Works equipment. Uses specialized protective equipment to change chlorine cylinders, repair leaks, and work with sodium hydroxide or acid cleaning equipment. Works in small, cramped areas while adjusting gates settings in manholes and cleaning scum boxes. Works in confined areas that may contain toxic gases or that are low in oxygen while performing maintenance on several items such as oil changes, grit trap, cleanup, and confined space entry.

Mental:

Potable Water Treatment Plant Assignment: Reads and comprehends manufacturers' Operation and Maintenance manuals and follows manufacturers' instructions. Plans or organizes daily workload. Resolves operational related problems such as change in turbidity, process problems by making necessary feed and/or equipment changes. Coordinates work activities such as filter backwashing, and high service pump activities with water supply or utility control center. Performs jar tests and other related analysis in order to achieve maximum plant efficiency. Performs mathematical calculations to compute chemical usage, flow, and chemical feed. Comprehend written material from shift reports and daily reports to evaluate efficiency of chemical feeds. Learns job-related material through operator training and state certification programs. Participates in facility safety and training sessions. Works with SCADA system to monitor plant, interpret trends, and control valves and pumps. Sets up chemical orders with vendors. Utilizes limited purchase orders (LPOs) for plant purchases.

Water Reclamation Plant Assignment: Reads and comprehends manufacturers' Operation and Maintenance manuals and follows manufacturers' instructions. Calculates flow rates and calibrates feeder systems and various analyzers. Comprehends and makes inferences from safety material, plant operations and maintenance manual, and lab procedures to operate and maintain plant. Learns job-related material through on-the-job and/or classroom training regarding plant operations, safety, and maintenance. Works with computerized maintenance system for producing work orders. Works with SCADA system to monitor plant, interpret trends, and control valves and pumps. Sets up chemical orders with vendors.

Knowledge/Skill/Abilities:

Knowledge of:

Potable Water Treatment Plant Assignment:

SCADA systems;

the equipment used in a modern, conventional surface water treatment plant;

the chemical and physical processes used to treat potable water (example: coagulation, flocculation,

sedimentation, filtration, chlorination, and sludge dewatering);
the basic maintenance needs of water treatment equipment; and
federal, state, and local guidelines and regulations specific to the operation of a water treatment plant;
standard water treatment operating procedures.

Water Reclamation Plant Assignment:

the practices and principles of complex tasks and duties involved in water reclamation;
the operation and maintenance procedures of City water reclamation equipment and facilities;
the operations of digesters and solids handling equipment;
the properties of chemical compounds and laboratory procedures used in water reclamation processes;
the operational and safety regulations pertaining to water reclamation;
the standard principles of hydraulics, plumbing, metal cutting, and welding; and
the standard principles of biology, chemistry, and mathematics.

Skill in the care and operation of a variety of construction equipment including: a front-end loader,
backhoe, dump truck, boom truck, etc.

Ability to:

Potable Water Treatment Plant Assignment:

determine processing and treatment requirements;
collect and analyze samples at stages of processing to determine the effectiveness of the treatment
process and any adjustments that are necessary;
utilize specialized equipment, chemical feeders, various types of pumps, electronic equipment, electric
hoists, and laboratory equipment;
utilize computer workstations for data entry, data interpretation, SCADA operation and on-line
calibration monitoring equipment;
identify problems and provide solutions in order to ensure proper and efficient operation of the treatment
plant;
wear a respirator and/or SCBA;
work alone on shifts as required; and
establish and maintain effective working relationships with management, coworkers, supervisors, and
the general public.

Water Reclamation Plant Assignment:

perform quality assurance and quality control on laboratory equipment;
independently make well thought out decisions and act in the best interest of the City of Mesa;
wear a respirator and/or SCBA;
Works alone on assigned shift;
calibration of monitoring equipment;
perform housekeeping duties (example: keep plant area and lab clean and neat); and
establish and maintain effective working relationships with management, coworkers, supervisors, and
the general public.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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MZ/sb/th

CS4515.DOCX

EEO-SCW

JOB FCTN-TEC

Non-DOT Safety and Security-Y

CDL-N

RESP-Y

PAY GRADE: 48

IND-7520 - Water Treatment

IND-7580 - Water Reclamation

SWORN-N

Non-DOT Random-N

DOT-N

INCREMENTS 59-200