



DEPARTMENT: James City Service Authority/Utility Operations/Water Production

NATURE OF WORK:

This is an advanced technical and supervisory position performing complex technical and administrative work while overseeing all functions of the Reverse Osmosis Water Treatment Plant and associated well fields and pump houses. Responsible for all operation, development, maintenance and repair of the JCSA's Water Treatment Plant. Gives technical direction and supervision to assigned employees.

Work is performed under limited supervision of the Utility Operations Superintendent.

ESSENTIAL FUNCTIONS OF THE JOB:

Plans, coordinates, and oversees the operations of the Reverse Osmosis Plant. Supervises and participates in the design, installation, repair, and maintenance of the plant and related wells and systems.

Assures that the Reverse Osmosis Plant is operated in accordance with Federal and State regulations, and the Safe Drinking Water Act. Works closely with Water Production Superintendent on issues related to the JCSA's water distribution systems. Submits required operational and groundwater reports to regulatory agencies.

In the absence of the Water Production Superintendent, serves as water distribution manager to oversee system efficiencies and hydraulics. Skilled to make adjustments to Reverse Osmosis Plant, and the entire central system, without compromising the total distribution process. Ability to maintain other components of the water system including well facilities, booster stations, storage tanks, and PRV's.

Develops and maintains preventive maintenance programs and operating procedures for assigned personnel. Coordinates emergency repairs to facilities with other divisions, agencies, and contractors.

Reviews plans and specifications and develops recommendations for modifications to Reverse Osmosis Plant to include proposed rehabilitations.

Establishes and implements objectives and priorities for the Reverse Osmosis Plant; develops procedures, budget needs and requirements to meet the division's Goals and Objectives, develops and implements operating and overhaul schedules.

Promotes and ensures proper employee training and compliance with the County's safety program, departmental safety procedures, OSHA and VOSH. Ensures all equipment, materials and work conditions are adequately maintained to prevent accidents.

Ensures efficient operation and that water quality standards are maintained. Monitors all well operations and adjusts the pumping rates to maintain proper mix ratios between the upper and lower Potomac aquifers.

Performs a variety of administrative work to include maintaining an inventory of process chemicals and other supplies coordinating maintenance activities; the writing of standard operating and maintenance procedures.

Serves as the technical expert at the plant; resolves any technical difficulties and discrepancies involving membranes, chemical dosage changes, well pump changes, safety hazards, and other areas in connection with the reverse osmosis process. Troubleshoots equipment and process problems, and works to find the solutions.

Practices continuous learning through individual study, classroom training, seminars, and conferences.

Performs work safely in accordance with department safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to Supervisor.

May be required to report to work to serve customers during emergency conditions. May be assigned to report at a different time and location and to perform different duties as necessary.

Performs related work as required.

JOB LOCATION AND EQUIPMENT OPERATED:

Duties are performed primarily at the Reverse Osmosis Plant. Requires the ability to travel among various work sites. Requires working with hazardous chemicals.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

Considerable knowledge of water treatment plant operations, processes, and associated State and Federal regulations pertaining to water treatment to include: knowledge of water chemistry, sampling, and test techniques involved in determining conductivity, chlorine residual, turbidity, ph, alkalinity, and similar tests.

Extensive knowledge of the maintenance and operation required for a complex Water treatment Plant to include knowledge of emergency procedures specific to water treatment plant operations.

Ability to establish and maintain effective and courteous working relationships and communication with coworkers, private contractors, vendors, regulatory agency representatives, and the public. This includes the ability to communicate effectively, both orally and in writing.

Thorough knowledge of safety equipment usage and safe operating procedures and techniques.

The incumbent must be computer literate, able to manage a data base, and to use personal and peripheral computer equipment with reasonable speed and accuracy.

Ability to perform difficult mathematical calculations in calculating chemical dosages, converting units of weights and measures, and performing laboratory tests.

MINIMUM QUALIFICATIONS:

Requires a high school diploma or equivalent; college level courses in science, chemistry, or engineering preferred, extensive experience as a Water Treatment Plant Operator, including supervisory experience, or any equivalent combination of acceptable education and experience providing the knowledge, abilities and skills cited above.

NECESSARY SPECIAL QUALIFICATIONS:

Must have the ability and tolerance to function in an environment that requires the use of respiratory protection devices.

Must possess or be able to obtain within six (6) months of employment a valid Class II Water Treatment Plant Operator's License issued and approved by the Commonwealth of Virginia.

Requires a post offer criminal history and sex offender record check.

Requires a post offer physical.

Requires shift work and being on-call on a regularly scheduled basis to respond to emergency situations.

Requires the ability to travel among various work sites.

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IDENTIFICATION OF GENERAL APTITUDES AND PHYSICAL REQUIREMENTS

Position Title: Plant Supervisor
Department: JCSA

Position Number: 240
Division: Utility Operations/Water Production

The Americans with Disabilities Act requires that we identify the general aptitudes and physical requirements needed to perform the job listed above. Individuals who have the position must be able to perform all essential job functions unaided or with reasonable accommodation.

I. *Mental Abilities:* General learning ability. The ability to “catch on” or understand instructions and underlying principles.

- Ability to reason and make judgments
- Ability to understand and follow oral instruction
- Ability to understand and follow written instruction
- Ability to guide and/or give instructions
- Ability to make decisions in accordance with established procedures and policies
- Not essential to job function

II. *Verbal Abilities:* Ability to understand meanings of words and ideas associated with them and to use them effectively. To comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. To present information or ideas clearly.

1. Speaking/Talking:

- Answer telephone, radio or switchboard
- Communicating with County officials
- Communicating with general public
- Communicating with vendors
- Communicating with supervisors and/or with other employees
- Communicating with others to convey technical information
- Not essential to job functions

2. Hearing/Listening:

- Ability to distinguish between different tones
- For communication with County officials, public, vendors, supervisors and/or other employees
- Not essential to job function.

3. Reading: (ability to read and understand text)

- Essential to job function
- Not essential to job function

III. Numerical: Ability to perform arithmetic operations quickly and accurately.

- Ability to mentally perform accurate two digit calculations
- Ability to perform accurate calculations aided by a calculator, adding machine or measurement device
- Not essential to job function

IV. Spatial Abilities: Ability to comprehend forms in space and understand relationships of plane and solid objects. May be used in such tasks as blue print reading and in solving geometry problems. Frequently described as the ability to “visualize” objects of two or three dimensions, or to think visually of geometric forms.

- Essential function
- Not essential function

V. Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and quickly.

1. Manual Dexterity: Ability to move the hands easily and skillfully. To work with the hands in placing and turning motions.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use telephone | <input checked="" type="checkbox"/> Manipulate computer keyboard and mouse |
| <input type="checkbox"/> Use switchboard | <input type="checkbox"/> Use postage machine |
| <input checked="" type="checkbox"/> Use radio/console | <input checked="" type="checkbox"/> Use hand tools |
| <input checked="" type="checkbox"/> Use a calculator | <input checked="" type="checkbox"/> Use power tools |
| <input checked="" type="checkbox"/> Use a copy machine | <input checked="" type="checkbox"/> Other: <u>use delicate measuring equipment</u> |
| <input checked="" type="checkbox"/> Use a fax machine | <input type="checkbox"/> Not essential to job function |

2. Finger Dexterity: Ability to move the fingers and manipulate small objects with the fingers rapidly or accurately. For example: electrical wiring.

- Essential to job function
- Not essential to job function

Explain: _____

VI. Physical Demands:

1. **Strength:** The quality, state or property of being strong. The power to withstand strain, force, or stress.

Please check (✓) in appropriate boxes below.

	Ability to manipulate materials and/or equipment (lbs)						Frequency of Manipulation		
	5-	5-10	10-15	15-25	25-50	50+	Occasionally	Frequently	Continuously
Lift						✓	✓		
Push/Pull						✓	✓		
Hold/Carry						✓	✓		

Manipulation done from: ground to waist waist level waist to shoulder above shoulder
(Check all that apply)

Not essential to job function: Lift Push/Pull Hold/Carry (Check all that apply)

2. **Climbing:** To move up or mount by using the hands or feet.

<u>Ladders</u>	<u>Stairways</u>	<u>Steps</u>
<input type="checkbox"/> Step stool	<input type="checkbox"/> 1 flight	<input type="checkbox"/> 1-2
<input checked="" type="checkbox"/> 8' to 10' step ladder	<input checked="" type="checkbox"/> 2 flights	<input type="checkbox"/> 2-3
<input checked="" type="checkbox"/> Extension ladder	<input type="checkbox"/> 3 or more flights	<input type="checkbox"/> 3-4
<input checked="" type="checkbox"/> Other elevated tower _____	<input type="checkbox"/> Other _____	<input checked="" type="checkbox"/> Other as many as 25 _____
<input type="checkbox"/> Not essential to job function	<input type="checkbox"/> Not essential to job function	<input type="checkbox"/> Not essential to job function

3. **Ability to Stand, Sit, Walk, and Run:**

Please check (✓) in appropriate boxes below.

	Duration (hours/day)						Occasionally	Frequently	Continuously
	0-1	1-3	3-5	5-7	7-9	9+			
Stand			✓					✓	
Sit		✓						✓	
Walk		✓						✓	
Run									

If walking or running, over what type of terrain? flat rough both

Not essential to job function: Stand Sit Walk Run (Check all that apply)

4. Stooping, Kneeling, Crouching, and /or Crawling:

To bend forward or down from the middle of the waist or the middle of the back, to bend downwards, to lower oneself and/or to move freely on hands and knees.

Daily Amounts

- 0-5x 5-20x 20-50x 50+x
 Other _____ Not essential to job function

5. Reaching, Handling, Fingering, and/or Feeling:

To stretch out, extend, or put forth a bodily part. To touch or grasp something, by extending or stretching. To touch, lift, hold or operate with the hands.

Daily Amounts

- 0-5x 5-20x 20-50x 50+x
 Other _____ Not essential to job function

6. Seeing: To perceive or comprehend by the sense of sight.

Essential to job function: These characteristics are necessary (Check all that apply)

- Peripheral vision
- Night vision
- Focus (distinctness or clarity)
- Color perception (discriminate between colors)
- Depth perception (determine distance relationship between objects)

VII. Driving: The ability to transfer or convey in a vehicle.

Transmission	Standard	Automatic	Multi-Gears
Car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medium Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large Truck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Truck w/Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy Bus Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not essential to job function	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other (list) _____			

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