

**Water Treatment Plant Operator**

**FLSA Status:** Non-Exempt **Approved: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Reports to:**  Water Resources Manager **By:** General Manager

**JOB SUMMARY:**

Water Treatment - Under limited supervision, operates the conventional surface water treatment facility to meet all Safe Drinking Water Act criteria. Controls treatment plant processes and equipment to purify and clarify raw surface water for human consumption and industrial use. Operates the SCADA system as needed to monitor and control the treatment plant processes and the delivery of finished water through the WRWD Water District’s distribution system.

Decision making is dictated by WRWD district policy, EPA, and SCDHEC regulations. Supervision is available as needed in person or by electronic communication.

**DUTIES AND RESPONSIBILITIES:**

**Water Treatment Essential Duties and Responsibilities** include, but are not limited to, the following:

Performs the following duties necessary to operate the conventional filter water treatment facility. This position must have all the knowledge and skills to operate a SCDHEC water treatment facility.

1. Assimilate information from daily logs and data collection paperwork and/or computer systems as needed to document and communicate operational status, ensure effective communication with shift relief, and provide information needed for further analysis and troubleshooting.
2. Starts and stops conventional plant as needed to maintain adequate supply of treated water.
3. Collects water samples from various sources and analyzes for pH, Cl2, alkalinity, hardness, turbidity, bacteria, iron, manganese and other process parameters in accordance with prescribed procedures. Calibrates the respective analytical meters using prescribed methods. Records data on bench sheet and in computer spreadsheet. Compares results with regulatory requirements and adjusts process to make sure all water quality criteria are met.
4. Collects samples in accordance with prescribed procedures for shipment to certified labs for regulatory analyses. Accurately completes and files chain of custody forms.
5. Monitors inventory of laboratory supplies and equipment and submits order requests as needed to supervisor so replacement supplies can be obtained in a timely manner.
6. Performs required performance audit samples for all certified parameters to required specifications.
7. Assists with keeping all lab certification criteria up to date.
8. Performs jar tests, CCA analyses and other analytical tests to determine proper treatment processes. Applies results of these tools to correctly administer chemical doses to the water to be treated for proper clarification and disinfection. Assists Lead Operator with tests and evaluations to determine more effective treatment schemes.
9. Operates and monitors various machinery and equipment including chemical feeders, large water pumps and electric and manual valves.
10. Monitors plant equipment, pumps, and instrumentation to assess operating conditions, detect malfunctions and initiate corrective actions through proper writing of work orders needed to address problem conditions and/or equipment operation.
11. Transfers liquid chemicals from bulk storage tanks to day tanks by operating valves and electric pumps. Maintains awareness of hazards associated with any chemicals used in the treatment process or analytical procedures. Knows the proper procedures and uses proper personal protective equipment for each chemical.
12. Monitors, calibrates, and maintains chemical feed pumps to assure proper dose of chemicals. Records data on spreadsheet. Inventories treatment chemical supplies daily and makes supervisor aware of critical levels per prescribed instructions.
13. Operates and backwashes filters in accordance with prescribed methods. Records pertinent data in computer spreadsheet.
14. Observes the normal air/water backwash cycle for the filters. Knows and executes procedures to correct any malfunctions to the automated sequences.
15. filter system.
16. Monitors flow of wastewater to residual handling facilities, adjusting as necessary to keep within prescribed limits. Monitors outflow of residuals lagoon for flow and DMR related parameters.
17. Monitors the level of water in pipes, basins, filters, and tanks. Adjusts level using prescribed procedures.
18. Monitors electrical panels and usage.
19. Makes sure the auxiliary power generators works properly in the case of a power failure or when needed to meet power demands. Operates the diesel generators according to generator SOP. Monitors fuel level and request replacement fuel as needed.
20. Recognizes, communicates, and properly documents recurring processes and/or equipment problems as well as participating in the generation of possible solutions to such problems.
21. Enter and maintain critical component, maintenance and work order data in the maintenance spreadsheet and perform tasks to ensure proper utilization of and benefit from this system. Update comments.
22. Inspects and verifies calibrations of water quality monitoring panels. (turbidimeters, Cl2, pH, temperature, and conductivity meters).
23. Answers telephone calls from customers, duty personnel and other outside agencies. Responds to requests in a timely manner.
24. Make periodic rounds throughout the plant using a check list (paper or electronic) to make sure all processes are within preset limits. Manually enters required data into the spreadsheet.
25. Monitors security of facilities through use of cameras, SCADA and by prescribing to facility security procedures.
26. Assists maintenance staff with maintenance on all equipment. Becomes familiar with troubleshooting procedures by using SOP’s, equipment manuals and hands on training.
27. Uses SCADA system to monitor plant processes and distribution system. Adjusts as necessary per prescribed procedures. Able to troubleshoot SCADA communications problems using help from drawings, supervisor(s) and SCADA maintenance technicians.
28. Communicates with operations on-call and other personnel to initiate corrective actions in the distribution system when needed.
29. Keeps abreast of updated regulations such as SCDHEC, plant SOP's, water treatment plant equipment manuals and OSHA standards to keep plant in compliance.
30. Obtains necessary continuing education units to maintain license.
31. Performs housekeeping duties throughout plant and associated facilities as needed or assigned.
32. Assist with unloading chemicals from bulk shipments. Reviews paperwork, collects and analyzes samples of the delivered chemical to assure compliance with specifications.
33. Provides instruction and leadership to trainees as assigned. Offers training, advice and assistance as needed.
34. Consults with Lead Operator on any unusual water quality issues or security breaches.
35. Performs any other duties assigned or as needed to keep system operating properly.

Performs the following duties necessary to operate the conventional water treatment facility. This position must have all the knowledge and skills to operate a SCDHEC water treatment facility.

**SUPERVISORY RESPONSIBILITIES:**

Water Treatment -Assists Lead Operator with training and recommendations.

**BUSINESS-CONTACTS:**

Operations personnel, WRWD management, customers, other utilities, public officials, SCDHEC, EPA, OSHA officials and vendors.

Conducts tours of plant for organized groups.

**MINIMUM QUALIFICATIONS:**

High School Diploma or equivalent.

**Training or Experience:** Knowledge of water treatment plant;/l., . (A-D Levels Certification)

User knowledge of SCADA system.

Proficiency in using E-mail

Working knowledge of Excel and WORD applications, entering data, finding and saving files, working with spreadsheets and data bases, etc.

Ability to research water related topics in manuals, publications and on-line.

**ABILITY TO:**

* Understand and follow oral and written instructions;
* Work without direct supervision;
* Attend and understand technical courses;
* Assume responsibility for complete operation of treatment plants;
* Detect problems in equipment operations.
* Make sound, independent, decisions requiring treatment plant operations.

**WORKING CONDITIONS (Environmental):**

* EXTREME  COLD: Must be able to withstand temperatures as low as 20 degrees for up to an hour at one time.
* EXTREME  HEAT: Must be able to withstand extremely high temperatures for up to four hours at a time.
* WORKING  OUTDOORS: Must be able to work outdoors in all types of weather conditions, day or night.
* CONFINE SPACES:  Works in confined spaces.
* ODORS/CHEMICALS: Some exposure to mechanical, electrical, explosive, fume, odor, dust chemical, and toxic waste hazards, using proper safety precautions.
* SAFETY:  Uses good judgement to work safely and use equipment property.

**PHYSICAL REQUIREMENTS:**

* CLIMBING:  Ability to climb into and out of flocculators, sedimentation basins, etc.
* CLEANING:  Clean parts and machinery, clean buildings, lab and work areas.
* CRAWLING:  Under vehicles and equipment.
* DRIVING:  Cars and trucks.
* HOLDING:  Tools with both hands and all fingers.
* KNEELING: In one place for long periods of time.
* PULLING  AND/OR  PUSHING: Using both hands to operate large hand tools and/or pull such things as hoses or equipment.
* HEARING:  Must be able to hear radio transmissions.
* SIGHT: Must be capable of seeing equipment and gauges.
* STANDING:  Must be capable of standing for long periods of time.
* STOOPING:  Must be able to stoop over for long periods of time.
* LIFTING:  Able to lift 60lbs (2 man lift 100lbs).

**CONDITIONS OF EMPLOYMENT:**

Must pass a pre-employment background check, drug screen and/or physical exam. Employees are subject to random drug/alcohol testing throughout their employment. Must have and maintain a satisfactory driving record. A valid South Carolina driver’s license is required.

**Compensation:** Pay is commensurate with experience and market-reflective.

**Benefits:** Woodruff-Roebuck Water District offers a comprehensive benefits package including medical, dental, vision, life insurance, short/long-term disability, paid time off, holiday pay and 401(k) with company match.