

**BAY COUNTY DEPARTMENT OF WATER AND SEWER
JOB DESCRIPTION
WTP OPERATOR MECHANIC**

GENERAL SUMMARY:

Under the supervision of the Maintenance Supervisor, this classification requires the performance of general water plant and system maintenance. This includes the installation, maintenance, repair and replacement of a variety of equipment at the plant and at remote locations. When filling in as a relief operator, this job requires the performance of all duties necessary to operate a Water Treatment Plant and produce potable water that achieves all target quality standards.

EXAMPLE OF MECHANICAL DUTIES:

- a. As requested, performs maintenance, repair or replacement of general electric equipment such as lighting fixtures, lamps or bulbs, receptacle or outlets, and switches on de-energized and LOTO electrical circuits.
- b. Follows manufacturer's and engineer's blueprints, manuals and instructions, as well as directions from supervision to install equipment and perform plant maintenance. This includes the cleaning and repairs of large and small pumps and motors, chemical feeders, membrane skids, air compressors, blowers, sump pumps, valves, water storage tanks, chemical storage tanks, lights, flash mixers, parallel plate clarifiers, heaters, equalization basins, fans, meters, analyzers, electric, pneumatic and hydraulic valve operators and controls, telemetering equipment, instrumentation, and other equipment of the department.
- c. Operates equipment to check for malfunctions, determines what repairs or adjustments are necessary, makes repairs or adjustments, or arranges for such repairs or adjustments to be made.
- d. As directed, plows and/or removes snow, operates equipment and cuts grass from and around the facility and remote sites.
- e. Performs arc and gas welding, heating, brazing or cutting for major fabrication, installation and repairs. Loads and unloads materials, equipment, tools and supplies. Cleans up tools, bench and work area.
- f. Measures, cuts, bends, assembles and installs various conduits, tubing and raceways in compliance with local and state codes. Install fittings, boxes, and housing in compliance with local and state codes
- g. Operates, maintains, and makes minor repairs to portable and fixed generators used for power generation at the plant and at remote sites.
- h. Conducts confined space entries as needed at the plant and remote sites in compliance with the Confined Space Entry Program. Regularly identifies confined spaces, classifies confined spaces, reclassifies confined space, utilizes specific confined space equipment and PPE and fills out required documentation.
- i. Responsible, on own initiative, for completing Work Orders and assigned tasks in a timely manner. This includes proper inspection, maintenance, and repair work on all plant equipment to assure proper operation and functionality of all plant process.
- j. Responsible for notifying the Maintenance Supervisor when an adequate inventory of parts is running low. This includes all materials needed to maintain equipment throughout the plant

- k. Performs on call or standby duties as required in a balanced rotation with other members of the maintenance staff.
- l. Actively participates in general housekeeping and janitorial work as needed around the plant and while at remote site. Work areas are to be kept clean and clear of debris. Job tasks are required to be done in a clean and professional manner.
- m. Actively participates in the security of the facility as defined in the plant security policy. This includes but is not limited to controlling access to our plant and monitoring security cameras. This also includes physical and visual inspection of gates, fencing, doors, intrusion detection switches, and components of the access control system at the plant and in multiple remote locations

EXAMPLE OF OPERATIONAL DUTIES:

- a. Monitors water treatment & filtration system and performs all activities necessary to operate it. Components of the system include raw water tank, pumps, and micro strainers, membrane skids, control valves, backwash system and air blowers, chemical cleaning and treatment systems, waste neutralization, and air compressors.
- b. Operates the plant SCADA system to adjust and set flow, chemical dosages, chemical cleaning, integrity testing and other processes.
- c. Monitors and adjusts membrane waste wash water treatment and recovery system, including equalization basins and parallel plate clarifier units. This includes overseeing the efficiency of the clarification process.
- d. Conducts walk-through inspections of plant facilities to determine correct operating rates and condition of plant equipment; takes required readings and reports problems to supervision. Records problems or changes in the Operations logbook.
- e. Uses standard procedures to conduct water analysis tests such as Chlorine Residual, Fluoride, Turbidity, Conductivity, Hardness, Alkalinity, Calcium, Chloride, Sulfate, Ortho-phosphate, Total Coliform & E. coli, Heterotrophic Plate Count, pH, Taste & Odor, etc.
- f. Utilizes laboratory and field data to ensure that plant operations are in compliance with operating guidelines and that treated water entering the distribution system is within state and federal clean water standards.
- g. Performs quality control procedures for laboratory analysis as required to confirm test results. This includes performing regular monthly quality control tests on lab equipment, media, and de-ionized water.
- h. Accepts chemical deliveries into plant and provides direction for proper and safe unloading of Sodium Hypochlorite, Caustic Soda, Hydrofluosilicic Acid, Aluminum Chlorohydrate, Phosphoric Acid, Sodium Bisulfite, Citric Acid, Sulfuric Acid and any other treatment or maintenance chemicals.
- i. Determines chemical feed rates and adjusts chemical dosages.
- j. Records and maintains all required plant and laboratory data on specified log sheets
- k. Performs mathematical calculations to calculate flows, levels, chemical usage, pressures, residual levels, etc. which assist in preparation of regulatory reports.
- l. Monitors water levels of the 10 MGD raw water tank, finished water tanks and distribution water towers, and adjusts flow rates in response to water demand. This includes making regular contact with the Saginaw-Midland Municipal Water Supply Corporation (SMMWSC) to communicate raw water flows needed.

- m. Monitors online analyzers to ensure they are operating properly. Replaces reagents and cleans components of each analyzer when necessary.
- o. Performs cleaning operations on equipment, spills, tanks, floors, walls, bathrooms, and common areas using brushes, brooms, vacuums, mops, scrubbers, hoses, washers, etc.
- q. Performs relief operations as need covering various shifts Monday through Friday.

The previous examples are not to be construed as a complete list of all the duties of this classification. Supervision has the right to assign other duties as deemed necessary to ensure efficient operation of the employer's business.

THE FOLLOWING KNOWLEDGE AND ABILITIES ARE REQUIRED ON THIS JOB:

- a. Ability to read, interpret, follow and apply manufacturer's instruction manuals and blueprints to disassemble, repair and reassemble equipment.
- b. Knowledge and an ability and willingness to use hand and power tools of the trade.
- c. Ability and willingness to understand and properly follow written and verbal instructions and cooperate with others.
- d. Ability to use plant computer software and SCADA to monitor treatment and pumping.

EDUCATION AND/OR EXPERIENCE:

High School diploma or general education degree (GED); or at least one year of related experience and/or training or equivalent combination of education and experience.

GENERAL EDUCATIONAL DEVELOPMENT:

- a. *REASONING:*
Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.
- b. *MATHEMATICAL:*
Perform ordinary arithmetical and algebraic procedures in standard, practical applications.
- c. *LANGUAGE:*
Ability to read and interpret documents such as safety rules, operating and maintenance instructions and procedure manuals.

CERTIFICATES, LICENSES, REGISTRATIONS:

- a. Valid Michigan Driver's License
- b. Must obtain a Michigan Department of Environment, Great Lakes, and Energy (EGLE) F-4 Water Treatment Operator certification within 18 months of hire.

PHYSICAL DEMANDS:

Heavy to very heavy work. Involves lifting heavy objects, climbing, balancing, stooping, kneeling, crouching, crawling, reaching and handling.

WORKING CONDITIONS:

Both inside and outside work. Exposed to weather. Subject to noise and vibration, fumes, odors, dust. Selected duties may require confined space entry and use of appropriate safety and/or respiratory equipment. Worker must adjust to a variety of duties, involving working alone and apart in physical isolation from others. Must be able to work scheduled hours, overtime, both scheduled and unscheduled, on days of relief and beyond regular work schedule and to perform shift work, including holidays, nights and weekends.

THE BAY COUNTY DEPARTMENT OF WATER AND SEWER IS AN EQUAL OPPORTUNITY EMPLOYER. IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, THE DEPARTMENT OF WATER AND SEWER WILL PROVIDE REASONABLE ACCOMMODATIONS TO QUALIFIED INDIVIDUALS WITH DISABILITIES AND ENCOURAGES BOTH PROSPECTIVE EMPLOYEES AND INCUMBENTS TO DISCUSS POTENTIAL ACCOMMODATIONS WITH THE EMPLOYER.

William Bohlen, Director

Keri Christian, Accounting/HR Manager

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